

FEBRUARY 2016, Vol.18

# Confluence



## CURRICULAR ADAPTATIONS FOR CHILDREN WITH SPECIAL NEEDS



शिक्षा का अधिकार

सर्व शिक्षा अभियान  
सब पढ़ें सब बढ़ें

**Sarva Shiksha Abhiyan**

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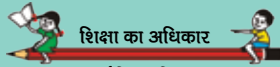


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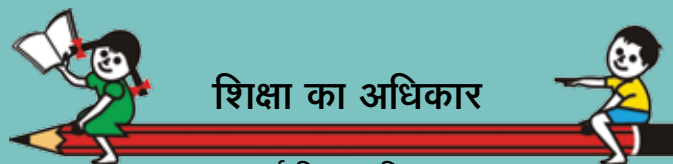
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# Concept of Curricular Adaptations

Prof. Anita Julka\*

**I**n recent years, increasing focus on inclusion has brought significant attention from educators, policy-makers, researchers and economists, to schools and classrooms in India. Constitutional provisions, legal mandates such as the Right to Education (RTE), 2009, Persons with Disabilities (PWD) Act, 1995 and policy measures to make improvements in India's education system, accessed by over 125,059,229 students as per U-DISE (Unified District Information System for Education), 2013) are being implemented. The aim of all these initiatives is to enable effective academic and social participation of CWSN (Children with Special Needs).

The classroom offers a dynamic, productive space where ideas, values, information, knowledge are shared and conveyed. Organization of the class and interactions amongst its fundamental components i.e., the students, teacher and curriculum-transactions, create potential for the group to move from a state of not knowing to one of knowing. Educational initiatives introduced to classrooms such as Continuous and Comprehensive Evaluation (CCE), inclusive

education and evaluative interventions such as National Council of Educational Research and Training (NCERT) learning indicators are also amongst the initiatives taken to improve teaching-learning in our classrooms. In light of the introduction of these educational innovations, the attention drawn and the urgency to make classrooms better call for revisiting and revising practices, including (1) planning, (2) methods of teaching and (3) assessments, that the classrooms have been following so far.

Creating an inclusive culture in classroom will involve attending to the curriculum, which includes the components of a course of study. These consist of the syllabus, textbooks and needed teaching learning materials, teaching strategies/processes and assessment and evaluation processes. In discussing the efforts in curricular development and reform, National Curriculum Framework (NCF) 2005 underscores the significance of making curriculum "an inclusive and meaningful experience for children" stating "this requires a fundamental change in how we think of learners and the process of learning." Attending to curriculum to define the classroom culture and the approach to the teaching-learning processes is thus a significant aspect of teacher's work in fostering inclusivity in their work with students.

The teachers in an inclusive school have to teach all children together in a class. It is the responsibility of the school to provide a flexible curriculum that can be accessed by all students including CWSN. It is important that the school should provide enabling experiences so that children experience success in learning and achievement up to their potential. This is only possible if the teachers respond to the diversities present in an inclusive classroom through curriculum adaptations.



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## Glimpse into our Schools

Classroom practices in our regular schools are still being dominated by rote memorization and preparation for tests and exams. Mostly in schools educational practices followed are still largely based on children achieving outcomes in terms of marks or percentages and realizing measurable behaviors based on pre-decided lesson plans. This guides the teachers, and the general practice observed in the classrooms is that teachers present and deliver knowledge in different subjects, that is to be generally memorized directly from the text or at times through different activities and tasks. Finally, evaluation is undertaken to find out what children can remember. In such a system there is no flexibility for children with special needs and she is thrown out of the system because she does not fit the existing system and the system is not changed for her in any way.

This is also because our teachers do not know about the strategies that are available to improve student learning and achievement. In a scenario like this students with special needs even if placed in classrooms would be excluded and considered as underachievers and teachers had low expectations from them.

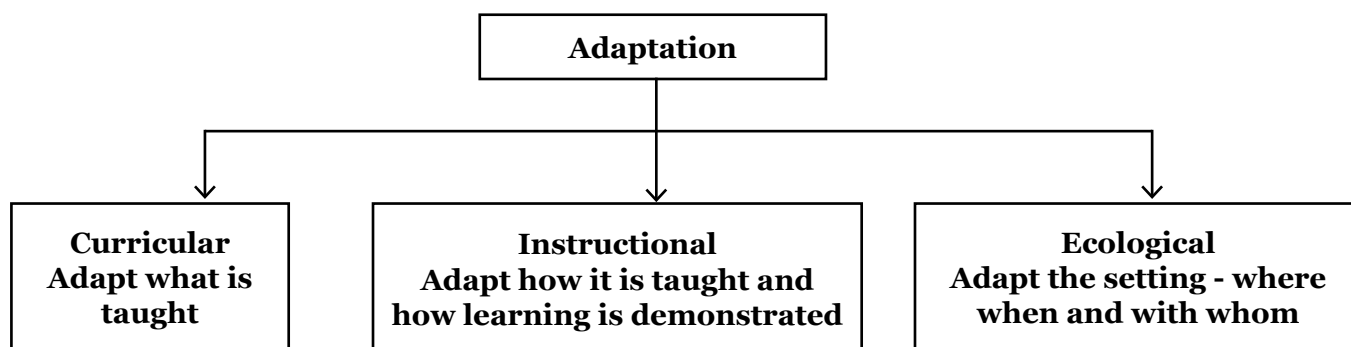
Shouldn't then we stop using these ineffective strategies and begin using ones that are effective for facilitating access to curriculum for all? Psychologists and educationists have been developing and evaluating the efficacy of various strategies for curricular adaptations focusing on content adaptation, teaching strategies and evaluation procedures for more than 100 years. Nevertheless, many of these strategies

even if proven effective are underutilized in our classrooms—many teachers in regular schools do not learn about them, and hence many CWSN do not use them, despite research suggesting that these strategies could benefit student learning and achievement with little added effort. This article introduces the concept of curricular adaptations and gives examples of different strategies that can benefit CWSN and other children in gaining better access to curriculum in an inclusive classroom.

## Curriculum Adaptations

Curriculum adaptation involves differentiation to meet the needs of all students. The content, the teaching process, assessment and evaluation, and the physical environment may be modified to help students to achieve success in the classroom. The kind of activities chosen by the teacher, including group activities, must be flexible and reflect the background knowledge of small groups or individual students. The following shows the adaptations that are required in different areas for inclusive pedagogy.

However, the two terms adaptation and modification related to curriculum create some amount of confusion, perhaps misunderstanding. While adaptation refers to adjusting assessments, material, curriculum or classroom environment, to accommodate a student's needs to enable him/ her to participate in and achieve the teaching-learning goals, modifications involve making changes to learning goals, teaching processes, assignments and/or assessments to accommodate a student's learning needs. For example, use of audio tapes, electronic texts where available, having peer or a



classmate to assist with class activities, or simply reorganizing seating of a child who is unable to be attentive, is easily distracted or distracts others in the classroom would be adaptations, changing the assignment to accommodate a student's learning needs: allowing use of letter-cards to spell words as a modification to saying the spelling aloud, allow the student with intellectual impairment to utilize concrete and/or more hands-on experiences, changing the conceptual difficulty level for some students would be modifications.

In case of content, teaching and assessment, the following are some examples of curricular adaptations that indicate that these adaptations can be used for all children in the classroom and are not limited to CWSN. These strategies create a universal design of learning in inclusive classrooms.

**Teachers teaching content using diverse strategies-**These include strategies like verbal, visual, kinesthetically, written, proceeding from simple to complex, concrete to abstract, step by step, scaffolding, concept maps, projects, group work, peer tutoring, using prior knowledge, brainstorming, dramatisation, giving extra time, giving alternative activities, drill activities, shortening assignments, organizing excursions/ trips, using large fonts, Braille or tacitly coded material, toys or blocks, carbon or xerox copy of notes, hand puppets, real life experiences, real objects, multiple choice questions, children's literature, magazines and journals, etc.

**Students expressing learning in diverse ways-** These include strategies like oral, written, tactual, gestures, drawing, acting, ICT, framing questions, paired reading, storytelling, song, rhymes, role play, discussions, debates, language games, flash cards, quizzes, graphic organizers, outlining passages, highlighting, and paper cutting/ folding, etc.

**Using supplementary material** like artifacts, calculators/talking calculators, Taylor frame, abacus, Braille, geometrical kit, Geo – board, Tactile board, Geometric shape board (for circle, graph, representation), Tactile graph sheet (for bar-graph, histogram etc), 3-d blocks and figures, manipulatives, flash cards or pictures on paper, posters, chalkboard, projection screens,

computers, books on tape and computerized text reader, screen readers, voice synthesis, scanners, daisy books, multimedia gadgets like CDs, MP3s, talking watches and talking clocks, videos/movies, modeling material like clay, textured objects/raised line paper, games and puzzles, etc, can help all children learn.

## Need for Curriculum Adaptations

As a result of Right to Education Act, 2009, the composition of classrooms is changing. Students with varying levels of abilities cannot, and should not, be taught in the same manner. Without adaptations/modifications, some children in your classrooms would never be challenged to perform upto their potential, while others may not be able to ever experience success. Curriculum adaptations involve effective teaching in the classroom that takes into consideration the individual needs of all children including CWSN and learning difficulties. It has also been seen that adaptations if carried out effectively facilitate both academic and social participation in class activities and can be used across various settings to facilitate success. Adaptations can also help in creating partnerships where parents and teachers can work together to evaluate/ implement adaptations.

## Strategies of Curricular Adaptation for an Inclusive Classroom

In an inclusive classroom environment, quality education would depend upon a number of factors. Crucial amongst these are understanding of special needs of learners, infrastructural facilities, modified environment that is warm, welcoming and inclusive, trained motivated teachers, flexible educational content (what is being taught), strategies for teaching and evaluating that meet the needs of all children that focus on meaning, active learning and interaction, sufficient teaching time and its optimal use by teachers, access of every child to teaching learning materials and continuous onsite support to the teacher by specialists if required. The following are examples of some needs and strategies for curricular adaptations for CWSN.



## Visual Impairments (VI)

Mostly children with visual impairments learn through the following non visual modes: Touch involving real, concrete materials; Listening that includes greater use of detailed and descriptive instructions) and Smell and Taste associated with real, concrete materials. In addition they exhibit the following needs across all subjects at elementary level:

- Visual stimulation;
- Experiential learning (observational/experimental/factual learning);
- Incidental learning (learning that happens naturally in the environment);
- Understanding of concepts like laterality (localisation), time, position, size, shape, association, discrimination, sequence, quantity, sensations, emotions, actions, colours (to the best visual ability), matching and classifying;
- Visual perception – learning from pictures, visual diagrams-maps, charts, graphs, tables, etc. and;
- Slower cognitive processing in the earlier years till coordination of senses has developed.

Based on the above the following exemplary strategies can be adopted for teaching child with VI different subjects at primary stage, along with other children in the class.

## Mathematics

1. To make the child learn the concept of 'Time', several real life examples can be given. Children



can be taken out in the morning, at noon and then in the evening on a sunny day, to feel the difference between different phases of the day.

2. To teach 'Commutative property of addition' put two different things like toffees and balls in two different buckets.
3. Then the children can be asked to count both the materials and add. For example, two toffees and three balls and then three toffees and two balls.
4. To teach the concept of 'Volume', group activity can be conducted. For example, take water bottles of two different sizes and make the children fill the bottles with water. One bottle can be filled with, say, three glasses of water while the other may just take two glasses to fill.
5. Hence the capacity of the first bottle is more. Children can take turns in filling the bottles, counting and recording.
6. The concept of 'Money' can be taught by first introducing notes and coins of different sizes. Then organise fun activity like arranging shop for all students and ask them to purchase items with the money given to them. The child with VI can explore the notes and coins tactually and repeatedly to understand the difference.
7. Make use of different senses for teaching mathematical concepts, for example, auditory (verbal descriptions) and tactual (converting visual figures into embossed tactile figures).

## Environmental Sciences (EVS)

1. Concept of 'Clouds' can be taught with the help of ice. Drop in temperature before rain because of clouds can be discussed in the class and students can be taken to a cooler place like cold store/fridge to get a feel of that.



- To teach the concept of 'Day and night' children can be made to observe the difference in temperature and noise during day and night. Days are warm and noisy whereas nights are comparatively cold and silent.
- To explain 'Function of roots', children can be asked to touch a plant uprooted just then and then a plant which is kept uprooted for few days. The child can differentiate between plants that are alive or dead.
- To differentiate between different animals, apart from tactile pictures or models, VI students can also be introduced to the sounds of the animals.
- To make the children aware of different types of material like glass, gold etc., they can be asked to touch and feel different textures and then help them talk about it.
- Involve students in exploring the environment using other senses like smell and touch and organise excursions, trips and visits for the students to historical places (educational tour).

## Language

- To help the child to start 'making sentence' about him/her, s/he can be allowed to experience by touch the physical attributes to help make sentences. For example, child can be asked to touch a warm cup and asked to make a sentence: 'the cup is hot'. Similarly, auditory input can be given by different sounds.
- To teach 'adjectives', children can be exposed to real examples from the surroundings. For example, they can be asked to say something about his/her friend or can be made to touch different textures and explain the experience.
- For a VI child, pictures should be explained verbally in detail like – what, who, where and when. Based on the comprehension, help them summarize, give oral answers. Experience for understanding can be enhanced by tactile and kinaesthetic input. For example, differences or similarities between lassi and tea. Use of acting, dramatisation and role play helps the child to understand better.

## Hearing Impairments (HI)

Although the learning needs of children with HI may differ in terms of severity of problem and the quantity, quality and timing of the support services the children receive, the following are some common needs these children exhibit across various subjects.

- Development/Acquisition of Speech and Language vocabulary, syntax and figurative language (like similes, metaphors and idioms);
- Understanding of abstract concepts;
- Reading and spellings (because of difficulty in phonemic awareness and speech sound discrimination);
- Communication Skills (speaking and listening, understanding);
- Mathematics;
- Organising ideas and;
- Communicating ideas.

Based on the above some exemplary strategies of curricular adaptation based on NCERT primary stage books of different subjects are given below:

## Language

- Concepts can be associated with visual vocabulary. For example, to explain the word direction, picture of an arrow can be shown.
- Concepts can be taught through activities: For example, a child is given the pictures of a rabbit and a tree. He/she can be asked to paste the picture of the rabbit on/behind/under/beside the tree.
- Visual vocabulary sheet (displaying words with pictures) on the topic taught can be prepared.
- Use multiple modes of communication (verbal





and non-verbal cues) like gestures, signing, lip/speech reading, facial expression, graphics, cartoons (speech balloons), pictures, symbols, concrete objects and examples to assist in comprehension.

## Mathematics

1. Concept of time duration can be taught with simple activities. For example, observing the time taken by two peers during meal time and then assessing who had taken longer time to finish the food.
2. Two digit additions without carry over or with carryover can be demonstrated using simple objects like sticks or beads.
3. Word problems can be understood through real life examples/ situations or pictures.

## EVS

1. Concept of clouds can be communicated through multimedia and real life experience. For example, show charts with a cloudy sky or relate to outside sky. They should understand that the clouds are above us in the sky.
2. Properties of water can be taught through simple activities like taking a glass of water and dropping stones, leaves, salt, paper etc. into it.
3. Concept of evaporation can be communicated through observations and discussions. For example, the phenomena of drying of clothes, boiling of water, etc.
4. Knowledge of sounds can be developed with the help of recorded sounds of birds and animals which can be played on DVD player/ tape recorder on high volume first, gradually reducing the volume. While doing this, there is a need for flexibility and relaxation with reference to the student's response. Rigidity is completely ruled out as some children with HI may not hear certain sounds initially. With practice they may be able to identify and discriminate.
5. Organise group work involving activities like cut and paste, and make use of pictorial displays,

models, pictures, posters, flash cards or any visual items to illustrate facts/concepts.

## Cognitive Impairments and Intellectual Disability (ID)

When we discuss students who are not able to learn or, express their learning, it is important to understand that this behavior is not a result of sensory, physical or motor impairments. These learning needs are related to the influences and impacts on the brain. Impairments in cognitive, intellectual functioning may reflect in one or more of the following areas:

- Visual and/or auditory perceptions;
- Meta-cognition (knowing about one's own thinking and learning what skills, strategies are needed to plan and carry out tasks);
- Retaining information and memory – for example, transferring knowledge from one task to another;
- Information processing – attending to information from different senses;
- General intellect (Intelligence);
- Physical activity (over activity or under activity, coordination, balancing, drawing, discriminating between directions and positions – right and left, up and down, etc.);
- Attention and concentration – short attention span, distractions, impulsivity;
- Eye hand coordination, for example, in geometry, handwriting and diagrams, etc;
- Language (reading, writing, spellings, speaking) and understanding Mathematics;
- Exposure to experiences (limited experiences);
- Ability to change according to situation;
- Expression of needs and emotions;
- Thinking, reasoning, problem solving and understanding;
- Social activity and problems of self-regulation (for example, tantrums and lack of understanding of social rules/inhibitions, peer relationships, not understanding the meaning of what people say);



- Communication skills and,
- Over or under sensitive to sounds, smells and touch.

The following are some exemplary strategies for curriculum adaptations:

### Language

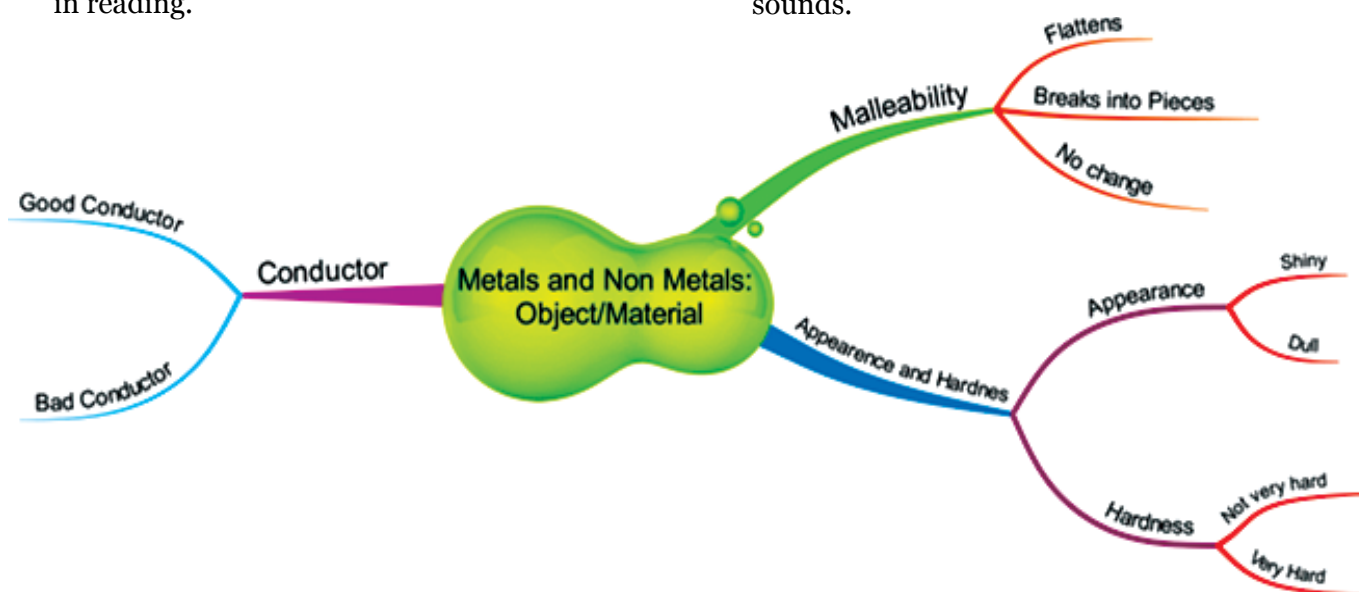
1. Long lessons/stories can be divided into smaller parts with a meaningful beginning and ending.
2. Poems can be taught through actions and repetitions.
3. Students with autism need more real experiences and activities in order to learn something. For example, the concept of 'turning' can be taught by doing simple activities like using the fan regulator, tap, gas-stove knob, etc.
4. New words can be taught using a visual dictionary.
5. While using picture cards, limit to only two colours or use only primary colours as some children may have difficulty in differentiating minor differences in shades of colours.
6. Enact poem while it is being read. Recite it with expressions.
7. Frame questions for different sections of the lesson like introduction, assessment, etc.
8. Make use of paired reading to promote fluency in reading.

### Mathematics

1. For place value use scale with unit place having 9-blocks in one colour and another colour at ten's place.
2. Fractions can be taught through paper folding. While teaching the concept of money, children with ID can be introduced to rupees as paisa but its conversion may sometimes be difficult for them to understand.
3. Concepts of measurement (tall, short), capacity/volume (full, empty), weight (heavy, light), shapes (circle, triangle), etc., can be understood better through concrete things/objects, flash cards.
4. ID students can be given clay to make different shapes. Moreover, instead of giving all shapes together, give one shape at a time.
5. Always go step by step and provide guidance/feedback at each step while solving a problem.

### EVS

1. Group activities will facilitate active participation and experiential learning. Activity based learning facilitates understanding scientific characteristics of the materials around, for example, different houses.
2. The concept of rain can be demonstrated by playing recorded sound effects of thunder and rainfall with associated animal and insect sounds.



3. Picture/flash cards can be used to introduce the objects that are not available, such as, non-regional plants.
4. Pictures should be labelled and captioned.
5. Make use of graphic organizers.

## Conclusion

Recent developments in the field of education have made many teachers anxious about including CWSN in classrooms. Some teachers lack the confidence to teach these children effectively while simultaneously teaching a large group of typically developing students. In an attempt to meet such challenges, documents on curricular adaptations are being prepared all over the country. This may be prompted by the mistaken belief that a document on curricular adaptations would serve as a magic wand and help our teachers meet the demands of inclusive classrooms. While it is true

that curricular adaptations could be one strategy to increase participation of students with disabilities in the learning process, it must be borne in mind that no two individuals with special needs have identical needs even in case of similar disability. Considering the individual differences that exist in our classrooms, any document on curricular adaptations can only be an exemplar material that calls for teachers to reflect on their own strengths and shortcomings. This way, they can identify successful strategies and their experiences would guide the daily working of their classrooms.

There are many factors that promote learning of CWSN in the classrooms and curricular adaptation is one such factor. The strategies described will not be universal for all CWSN and will benefit only those students who can use them. Nevertheless, when used by teachers, these will produce meaningful gains in performance of all students and not CWSN.



# Adaptations for Teaching Children with Hearing Impairment in Mainstream Classrooms

Dr. Varsha Gathoo\*

*“The problem is not how to wipe out the differences, but how to unite with the differences intact”--- Rabindranath Tagore*

Schools need to be supportive and an engaging places for ‘all’ children. Children are diverse in terms of their varied backgrounds and hence differences are inevitable in a typical class of mainstream school. Divergence occurs if children have learning difficulties in consequence of disability. However diversity is an asset and needs to be valued and inculcated as schools are the training grounds of the society. Inclusive education aims to provide access, equity and a fair chance to all learners to enrich, grow and live to together. As per Census (2011), out of the total disabled children within the age group of 0-6 years, 85283 children are children with hearing impairment. Their needs differ due to their inherent language and communication barriers. The present article is outlined to elaborate on the needs arising as a result of hearing impairment in young children and the corresponding adaptations required for teaching and evaluating their learning outcomes in inclusive classrooms.

The acceptance of the philosophy of inclusive education has changed the social landscape of the classrooms in the country. There is both a national and a global movement of ‘Education for All’ in an inclusive environment. Proponents of inclusion argue that inclusive education is a better education



for all and that differences can be a resource for community development. Children with disabilities having special educational needs, including those with hearing impairment now find access to typical classrooms in mainstream schools. The Right to Free and Compulsory Education (2009) promotes the concept of strengthening the neighborhood schools and have ‘one school for all’, hence the classroom instructional strategies face newer challenges for teachers in mainstream schools than ever before. Though the mainstream school teachers may have a strong internal desire to reach out to ‘all’ students

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in their class including those with disabilities, lack of professional training and experience of handling children with disabilities may make some feel insecure in handling their instructional needs. This is because students with disabilities may often require modifications and adaptations in teaching-learning and evaluation strategies.

Children are unique, they are individuals and hence no two children are alike. The same holds true for children with disabilities. Uniqueness of these children lies in the way they learn and express. Disability of any nature is distinct as it encumbers the way teachers usually teach in class. This is likely to impact the usual process of teaching-learning in mainstream classrooms. However, if the impediments to learning are addressed, these children can and will have a chance to learn the way they can. Hearing impairment in children is one of the causes of learning difficulties and poses distinct learning challenges as compared to children with visual or loco motor impairments. Hearing impairment is not outwardly visible, but has apparent effects on the language and communication skills of a child. Language acquisition which is an auditory acquired skill in children gets seriously affected due to hearing loss occurring at birth (i.e. congenital) or in a young age i.e. 0 to 5 years (also called the critical period of language acquisition). Since reading and writing are language based activities the academic endeavors of children with hearing loss gets affected if it is not intervened early. Understanding i.e. comprehending the language is a prerequisite to reading. The content knowledge of the school subjects is 'not understood' by children with hearing loss due to their language barriers. This aspect may further compound and children may fail to express orally or through written answers in class. An overall understanding of the nature and needs of children with hearing impairment if developed will be beneficial to teachers in mainstream schools to address their issues of language and literacy. This may also call for adapting teaching

strategies which eventually is aimed to facilitate inclusive education.

### **Characteristics of Children with Hearing Impairment**

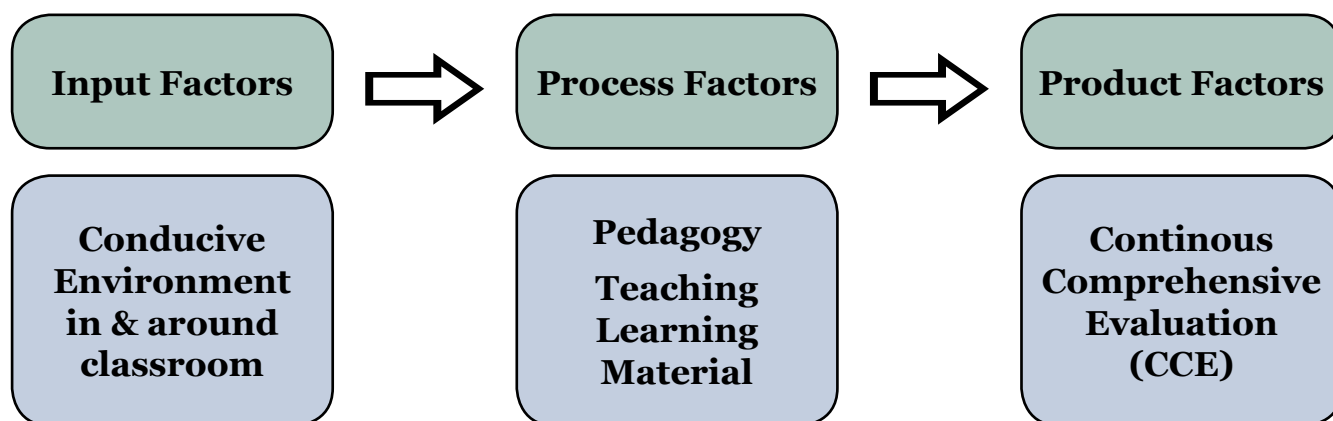
- Children with hearing impairment are commonly referred to as deaf children.
- They communicate differently either through speaking (which may sound unclear and or different) or by use of Sign Language, hence they should not be referred to as dumb.
- Hearing impaired are not the same as hearing children who cannot hear.
- Over 90% hearing impaired children are born to hearing parents. Hence their language acquisition process gets delayed.
- They form a heterogeneous group due to their parental/family status of hearing, age of detection and identification, type and degree of hearing loss, type of hearing device they use and the early intervention program that they have attended.
- Some children use manual language i.e. signs language while some may lip read and use spoken language to communicate. There could be some who use a combination called Total communication.

### **Adaptations in Teaching–Learning Process**

The objective behind adapting teaching strategies is to facilitate learning and not to lower standards to accommodate learning of students with disabilities. There are a range of strategies which are beneficial to the children with hearing impairment and these can assist all students in an inclusive class to learn. The idea behind adaptation is not to lower standards but to provide a reasonable opportunity to learn and to demonstrate what they have learnt. Successful classroom teaching depends upon three factors: Input, process and output. Each of these factors needs adaptation. These factors are shown below.



## Factors that Need Adaptation



### The Input Factors: Conducive Environment in and around the Classroom

Unwanted sound is called noise. This may interfere with listening, paying attention and carrying out conversations in noisy environments. Noise creates disturbances and obstructs to what one wants to hear. Hearing aids amplify the noise equally and may result in masking the teacher's voice. It is therefore suggested to have the classroom enrolling children with hearing impairment in a quiet place. Noise inside the classroom also has to be cut down by spreading either a carpet (dari) on the floor and also by fixing rubber bushes to the furniture so that it does not move and create a screeching noise. Coolers or fans in the classrooms also make a lot of noise; this also needs to be checked. It is preferable to have the deaf child seated in the front row in the middle. This is essential for audibility of the teacher and lip read her. Some children with hearing impairment are sign language users. If an interpreter is available then the seating arrangement may be such that the child sees the interpreter, the teacher and also the black board. Generally a semi circular arrangement makes children with hearing impairment more participative.

### The Process Factors: Pedagogy and the Teaching Learning Material

A child centered pedagogy with a constructivist approach is beneficial for teaching children with hearing impairment. Some supplementary tips are given below:

- Face the child while talking and don't speak with your back facing the child or face covered.
- Encourage classmates to take turns so that the child understands what is being expressed
- Communicate in the language (sign/oral) known to the child.
- Use simple, natural, communicative and situational language within the context.
- Children with hearing impairment fail to acquire language naturally. It needs to be taught to them. Use of meaningful situation will help to enhance language learning.
- Contextual cues also help children in understanding language. So make sure that the context is understood by them.
- Reading is a language based activity. It gets hampered due to the deficit language skills. Hence children with hearing impairment need

more visual cues to understand the text.

- Symbolic sign or a symbolic picture can assist in global understanding of the context.
- Many students are known to use whole word methodology or sight vocabulary instead of phonics.
- Speech balloons and conversations balloons could assist in reading where characters are involved.

### Instructional Strategies

Topics to be taught in the class could be informed in advance. This may help the parents to ready the child and also pre-teach the vocabulary. While teaching the objectives needs to be stated so also previous lessons could be reviewed and content could be summarized periodically. The classroom instructions could be direct, precise and the key words need to be repeated. Concept development and global understanding of the text is more essential and hence efforts to be made to develop these appropriately. Giving day to day examples and using new words in varied contexts helps to concretize the concept. Information provided visually in the form of charts, line drawings, stick figures, organizational charts, diagrams or with the help of power point presentations and captioning helps children with hearing impairment in understanding and is enjoyable to all children in the class. Techniques such as using analogy or connecting knowledge of one subject to the other helps children for e.g. the Concepts of vaporization of Science could be taught along with the chapter of weather in Geography. Demonstrations help in fostering understanding of concepts in Science and Geography and role playing or dramatization will help in subjects of History and Language. Others tips for classroom strategies are:

- Repeat the comments and questions of other students, especially those from the back rows.
- Acknowledge who has made the comment so students who are hearing impaired can focus on the speaker.
- When appropriate, ask for a hearing volunteer i.e. a buddy to team up with the child with hearing loss for in-class assignments and as note taker.

### Other specific adaptations for instructional strategies may include the following:

- If possible, provide transcripts of audio information and allow the student with hearing impairment to work with audiovisual material independently for a longer period of time.
- Allow several breaks or extra time for oral and written responses for a child with hearing impairment in the class discussions and assignments.

### Adapting Instructional Materials

The instructional material such as school text books, reference books or supplementary reading material like rapid readers or workbooks are primarily developed and written for children without disabilities. Children with hearing impairment may find to read and understand these due to the language load of vocabulary and complex sentence structures. They may fail to comprehend the instructional material and hence it will be beneficial to adapt it so that they get an equal opportunity to read and learn from it. Adapting teaching materials involves making changes to the text and lay out so that the student has access to information during the course of instruction. While care is to be taken not to miss out crucial technical vocabulary of each subject, the strategy is to decide between essential and desirable vocabulary and sentence structures. Instead of having long sentences the same could be some times broken down to small meaningful sentences. Presenting information diagrammatically or in a tabular format could also be tried out for Science and Geography. History has a lot of written text. This could have more illustrations and could also be supported by videos. Language text books could have glossary or foot notes and for younger classes have speech balloons and think clouds. Content could also be adapted by use of flow charts or by presenting some information in the form of bullets. Care needs to be taken to see that reading is to be fostered by making it interesting and suiting to the level of children. At no point should adaptation curtail the reading habits. Maxims of teaching proves beneficial for adapting such as known to unknown which is provided in an illustration for a History lesson of Invention on Wheel below:



## Original text

### १. चाकाचा शोध

वेगवेगळी वाहने आपण पाहतो. चाकामुळे वाहने जोरात धावू शकतात. फक्त वाहनांमध्येच चाक असते असे नाही. चरखा पहा. रहाट पहा. जत्रेतील फिरत्या पाळण्याचा खेळ पहा. या सर्वांमध्ये आपल्याला चाकांचा उपयोग केलेला दिसतो. वेगवेगळ्या यंत्रांमध्ये चाके असतात. घड्याळातसुद्धा एकमेकांना जोडलेली चाके असतात.

चाकाचा शोध अश्मयुगाच्या शेवटी लागला. कुंभारकाम करणाऱ्या माणसाने चाकाचा प्रथम वापर केला असावा.

ओल्या मातीच्या गोळ्याला हाताने आकार देऊन माणूस भांडी तयार करत असे. हे काम अधिक चांगल्या रीतीने करण्यासाठी माणसाने आडव्या फिरणाऱ्या चाकाचा वापर सुरू केला. चाकामुळे त्याला सुबक आकाराची मातीची भांडी तयार करणे शक्य झाले. तो अधिक भराभर भांडी बनवू लागला.

चाकाचा शोध लागल्यावर गाड्यांना लाकडाची चाके जोडण्यास सुरुवात झाली. सुरुवातीची चाके भरीव होती. काही वेळा लाकडी फळ्या एकमेकांना जोडून चाके तयार केली जात असत.



भरीव चाक



आजचे चाक

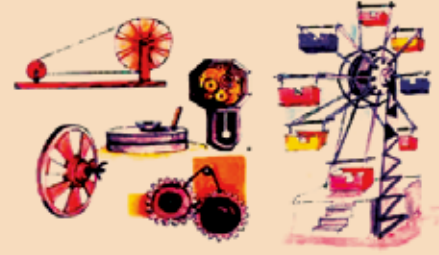
३६

भरीव चाके फार जड होती. अशा चाकांची गाडी ओढणे त्रासाचे होते. म्हणून कमी वजनाची चाके तयार करणे आवश्यक झाले. त्यामुळे माणसाने आरे असलेले चाक तयार केले. भरीव चाकाऐवजी माणूस आजच्या

## Adapted text

### १. चाकाचा शोध

रस्त्यावरून जाणारी, रुळावरून पळणारी किंवा आकाशात उडणारी अशी वेगवेगळी वाहने आपण पहातो. सगळ्या वाहनांना चाके असतात आणि चाकामुळे वाहने जोरात धावू शकतात. फक्त वाहनांमध्येच चाक असते असे नाही. चरखा, रहाट, जत्रेतील फिरता पाळणा या सर्वांमध्ये आपल्याला चाकाचा उपयोग केलेला दिसतो. वेगवेगळ्या यंत्रांमध्ये चाके असतात, घड्याळातसुद्धा एकमेकांना जोडलेली चाके असतात.



चाकाचा शोध:- चाकाचा शोध अश्मयुगाच्या शेवटी लागला. कुंभारकाम करणाऱ्या माणसाने चाकाचा प्रथम वापर केला असावा.

पूर्वी माणूस ओल्या मातीच्या गोळ्याला हाताने आकार देऊन भांडी तयार करत असे. नंतर आडव्या फिरणाऱ्या चाकाचा वापर सुरू केला. चाकामुळे त्याला सुबक आकाराची मातीची भांडी तयार करणे शक्य झाले. तो अधिक भराभर भांडी बनवू लागला.



## The Output Factors

Evaluation of learning in children with hearing impairment possesses a special challenge to the teacher. This is especially in conducting the Continuous Comprehensive Evaluation i.e. the CCE. Since most of these have a great deal of oral and written evaluations, children with hearing impairment are unable to undertake it. Alternate forms of assessment such as performance based assessments could be used. Oral recitations or answers could be substituted by written assessment or a project base evaluation. Descriptive question is a serious challenge to many children with hearing impairment and this could be adapted to objective type with multiple choices questions. Care could be taken that it is not simplified but to design it in such a way so as to make the child think deeper. The Persons With Disabilities Act (1995) provides Language concessions to children with hearing impairment, so children who do not wish to opt

for other two languages have to be exempted for evaluation of the 2nd and 3rd Languages. There are also concessions for Math and Science offered by State Boards. It is advisable to check these policies so that alternate evaluations could be planned. Additionally some children may need one to one instructions even for evaluation and may require extra time which is permissible under the law.

## To Conclude

Adaptation is not a mandatory requirement for all children with special needs. It should be judged and undertaken according to the needs of a child with disability. There is no set formula for adapting teaching strategies for children with hearing impairment. Children are unique and may pose unique challenges so each teacher needs to devise his/her own strategy keeping in mind the learner and his or her learning and expressing style.



# Curricular Adaptations for Children with Cerebral Palsy

Sheetal Batra\*

## Inclusion: A Right

**P**rateek is a 15 year old energetic and confident young boy. He is a cricket fan and follows all matches of Indian cricket team very closely. He enjoys listening to music and going out with his friends. Prateek has Cerebral Palsy. Cerebral palsy is a neurological condition that impacts muscle tone, movement and motor skills (the ability to move in a coordinated and purposeful way). It is caused by brain damage that occurs during birth or till 2 years of age. Apart from impacting the motor area the damage to the developing brain it can also impact the person's vision, hearing, speech and learning. The impairment has impacted Prateek's mobility, use of hands and speech. Currently Prateek goes to a neighborhood Government aided school and is studying in Class IX. Prateek uses a wheel chair for his mobility and a communication tool to express himself.

## Journey to a Mainstream Government Aided School

As a young child Prateek studied at the Action for Ability Development and Inclusion (AADI) inclusive school for a couple of years. With the passage of Right to Education Act in 2009, which guaranteed all children between the ages of 6 and 14 years the right to free and compulsory elementary education, Prateek's parents sought admission in the neighboring Government aided school. He was happy to go to this school as his friends from the community also studied there.

At the time of admission to the government school, seeing Prateek use a wheelchair, the principal was a little apprehensive about his adjustment in the new environment. Soon she was pleasantly surprised



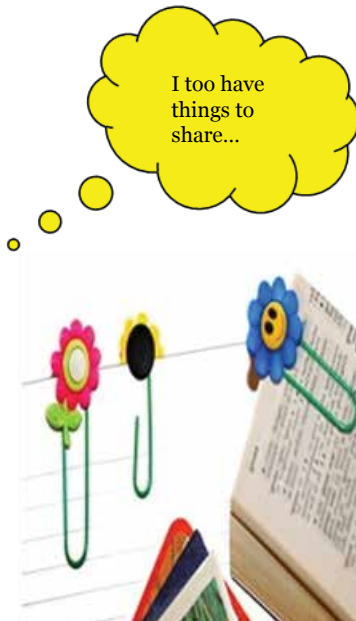
when she saw that he could clearly communicate and relate to all her questions. This changed her attitude and she realized that the child needs to be given opportunities and perhaps a little extra time for communication.

By the end of the first year at the Government school, Prateek had made friends and was a familiar face amongst the teachers too. The teachers and principal started believing that he had abilities and interests. They started looking beyond his wheelchair which may often become the sole identity of children with Cerebral Palsy. Prateek created an identity of his own as a fun loving, confident young boy, curious and eager to learn. He received the school's support as the principal and teachers soon believed in the policy of all children studying together.

Prateek needed support to move in and around the school in his wheelchair. He needed someone to help him in eating, drinking and toileting, someone

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to take out his books, etc from the bag, write the day's work for him. And most crucial he needed people who would wait for his thoughts / views to be expressed. He used a picture-word - alphabet communication book to overcome the difficulties in speech. Various members in his school-teachers, students and administrative staff took time to get adjusted to his communication style.



It is seen that the Management of any school is the key to the success of an inclusion program. Once convinced they are able to bring about changes in the attitudes, make modifications in their infrastructure and create an environment for curricular modifications and reforms. The teachers then are able to influence changes in policy, culture, processes and activities of teaching and learning.

The itinerant team provided support to teachers and parents through regular school and home visits. The team reviewed the process with teachers and provided them with alternate ways of including Prateek in all school activities. Series of training sessions were planned for teachers to acquaint them with information and skills in working with the child, including class activities and making modifications in the environment too. Many of the teachers used their own experience to work out some obvious solutions like creating physical space for the child's mobility aid, pairing the child with impairment with another peer, seeking human support for self care needs, etc.

### Addressing Infrastructural Barriers

Prateek's new school is a double storied building with classes on both the floors which could have posed a challenge for Prateek especially, to access

the top floor classes. This was addressed by the school's authorities who decided to hold classes for Prateek and his classmates on the ground floor for all these years.

However there was the games period, when Prateek felt sad as his wheelchair used to get stuck in the grass and he was unable to enjoy his favorite game of cricket. And often he wished that there could have been a concrete path in the playground which would help all children including children using mobility aid. The School though, ensured the access to other places like the washroom, entrance to the building. They had ensured ramps near the staircase, wider doors for washrooms, low height wash basins, grab bars, including a western toilet, jet washes were other accommodations that were worked out for Prateek.



It was seen that many principals are unable to initiate many of the necessary modifications in the playgrounds, library, reception, canteen and other spaces frequented by children due to lack of planning and allocation of resources. These spaces are equally important for a child's growth and learning as much of the hidden curriculum is transacted using these spaces. Unfortunately many children with Cerebral Palsy and other impairments are left out of this critical component of curricular transactions.

### Addressing requirements of Human Support

Another big area to be planned for is human support. Human support can be provided in many forms. It could be the peers in class supporting in taking



the books out from the bag, volunteer supporting in doing homework, writer/amanuensis who takes down dictation from the child with disability during class/exam work or a support staff helping in propelling a wheelchair/ using a toilet, a teacher / volunteer for reviewing of work, support in learning self care activities, etc.

In most schools, support staff is provided for pre primary classes. Here when we are talking of including children with Cerebral Palsy with mobility/communication difficulties, the need for a support person may be crucial for higher classes also. Often, schools rely on parents to provide the physical support or pay for services. Parents in most situations are not able to cater to this extra demand by schools. The provisions under the RTE Act must be tapped to ensure support services for children with Cerebral Palsy.

### Curricular Adaptations

Curricular adaptation is an ongoing dynamic process that modifies and adapts the subject, content or methodology (teaching and evaluation) to meet the learning requirements of all children having diverse needs. It welcomes learners of all abilities and ensures that every child is learning. Experiential learning, multi-sensory teaching and learning, games and activities with modifications to ensure participation of a child with Cerebral Palsy are some of the interesting ways to accommodate to the specific child's needs as well as making learning interesting for all children. Prateek's teacher ensured that he is not a passive observer of all the activities but was able to manipulate the learning material and participated in all activities.

The teacher planned ahead of the class and prepared material suitable to the topic. Some of the social science classes were taken outside of the classroom and got children to work in pairs.



Each pair was given a certain activity and asked to develop their own method of presenting the work. The interests and abilities of all children were taken into consideration and therefore Prateek's communication style and mobility issues were also addressed. All children and Prateek in particular enjoyed the activity as well as presenting and learning from each other. The evaluation too was uniquely integrated within the activity and had multiple ways of evaluation.

It is important that the teachers know the level and style of learning of the child with Cerebral Palsy. The specific modifications would need to be tailor made to the child's needs and learning style.

### Some accommodations that may help the child with Cerebral Palsy to be included in the activities:

- Facilitate the child's moving around and reaching out and exploring the environment. Manipulation of material and objects in the environment are essential components of learning. Postural and mobility aids will help the student to move around and, explore and manipulate objects in the environment.
- Adapted furniture with ample leg space, wide table top to allow elbow space and good back rests maybe some of the accommodations





required. Adjustable desks, portable easels for reading, wedges to prop up material are required for some of the students.

- Writing or communication aids may be required for some students who have difficulty in verbal expression/using paper pencil activities. Pencil grips, thicker crayons, page turners are other useful aids for some children with Cerebral Palsy. Specific communication tools/computer aided software and hardware may be required by a few children.

- Alternate teaching and evaluation strategies may need to be created for some children. Examples of these would be one word



answers, choose among the different answers with fewer options, use of technology like tape recorders/computers/calculators, may be tried out for a few children. Modified key boards and screen readers may be an option for some. Some children may prefer dictation, therefore extra time, writers and a quieter place to work in may need to be arranged for.

- Teacher would need to accept close approximation of the words and may not expect perfect letter formation as long as they are legible. Notebook pages with bigger boxes or horizontal lines may be used in place of regular sized lines to accommodate for large letter formations.

- Material used for worksheets, picture/shape cutouts, word cards need to be on thick paper and laminated for ease of manipulation.

- Wooden/plastic material of good quality with no sharp edges and points of easy grasp must be ensured for concept/skill teaching during early learning. Colour contrast based on child's needs must be ensured.

- Language and instructions must be age appropriate and level appropriate.

- Rules of the games may be modified to allow children to participate meaningfully.

- Review and revision must be incorporated in the teaching process itself.

- Encourage independence and self correction by the child himself/herself.

- Above all experiential learning, use of concrete material and multi sensory teaching combined with all the postural, mobility and communication aids will usher in quality teaching for all and especially aid learning for children with Cerebral Palsy.

- Seat the child in front of the teacher for all instruction and directions to minimize the visual distraction of classmates.

- Seat the child away from windows, doors, or other sources of distraction. Give the student a quiet workplace. This could be in a corner, the hall, or the library. This place should not be used as a punishment, but rather a place the student can choose to go to when focusing becomes more difficult.

- Have the student work in short intense periods with breaks to run an errand.

- Change tasks frequently. For example, complete five math problems, then do some spelling, etc.

- Contract for work to be done in advance. For example, finish a specific number of problems by a certain reasonable time. Short assignments with frequent checks are more effective than two or three sheets of independent work at one time.

- With younger children, simple gestures, such as a hand on the student's shoulder, can be a helpful reminder to focus during listening periods.

- Task analysis: break the task in to smaller units and teach unit by unit.

- Frequent repetition is required till over learning takes place.

- Remember the child would require much more time and practice, before the task is mastered.

- Present only concrete concepts.

- Multi sensory approach, also known as the visual, auditory, kinesthetic and tactile (VAKT) might prove very effective.



- Use language and vocabulary with when the child is familiar.
- Use a developmentally appropriate approach.
- Use of visual aids, flash cards and joyful teaching-learning material may help children learn faster.
- Progress should be made from simpler to more complex tasks.
- Encourage the child to take initiative.
- Use of computer to assist in programmed learning may be a significant part of teaching strategy.

## Conclusion

Early intervention is the only key to reduce the impact and development of disability. Caring for a child with CP can be exhausting so family members, neighbours, teachers and friends should help the child and his/her family. The success achieved by a CP child depends largely on the extent of his or her physical and mental disability and the kind of support he/she receives. With appropriate support, many CP children can lead normal lives and become productive citizens, if given the opportunity.

# Adapting Teaching for Children with Cognitive Disabilities

Dr. Simran Randhawa\*

The field of special education has moved significantly from a perspective of caretaking and protecting to an expectation of learning and growth. As educators the question is not whether students can learn, but how much they can learn, and with what types of instruction and support. Schools need to be equipped to provide appropriate and effective instruction as well as how to challenge each student regardless of their ability levels to attain higher goals.

The two broad characteristics shared in varying degrees by all individuals with Cognitive Disabilities (CD) are limitations in intellectual functioning and limitations in adaptive behavior. Limitations in intellectual functioning often include difficulties with memory recall, task and skill generalization,

and these students may demonstrate a tendency towards low motivation and learned helplessness. However, these limitations co-exist alongside strengths in other areas within the individual. Issues in adaptive behavior may include difficulties with conceptual skills, social skills and practical skills. These limitations have a significant impact on learning.

As the curriculum is central to the teaching and learning that takes place in schools, it can become one of the most significant barriers to learning; and consequently, exclude many learners like students with CD. In order to overcome this barrier to learning, the curriculum has to be differentiated; and assessment standards need to be modified, so that these students reach their potential in both academics and other functional areas such as independent living. Various aspects of the curriculum that need to be looked are:

1. Content
2. Medium of instruction
3. Classroom Organisation
4. Methodology
5. Pace of teaching
6. Learner and teacher-support materials
7. Assessment.

Every learner receiving special education services must have an Individualised Education Programme (IEP). This programme includes a statement of the learner's current educational-performance levels, including how the learner's disability affects his or her progress in the general education curriculum. The curriculum needs to be modified in such a way that it not only allows the learner to achieve annual goals and be part of the curriculum, but it also



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enables him or her to participate in extracurricular and other non-academic activities. The most recent research indicates that from both a theoretical and practical perspective the use of general teaching methods is insufficient for addressing intellectual barriers to learning. It is, therefore, imperative that educators use more specific educational-support methods to deal with learners who experience intellectual barriers to learning.

There is no recipe for adapting general education curriculum to meet each student's needs. Each teacher, each student, each classroom is unique and adaptations are specific to each situation. Keep in mind that curriculum does not always need to be modified. By providing multi-level instruction you will find that adapting a lesson may not always be necessary. Differentiating instruction and providing multiple ways assess allows more flexibility for students to meet the standards and requirements of the class. At other times, the curriculum can be made more accessible through accommodations. In addition, supports for one student may not necessarily be the same in all situations, e.g., a student who needs full time support from a paraprofessional for math may only need natural supports from peers for English, and no support for art. Supports should not be determined by the disability label, instead supports should be used when the instructional or social activity warrants the need for assistance. A few suggestions provided below are indicative not exhaustive and could be used for adapting teaching.

### General Strategies and Suggestions

Students who have mild intellectual disabilities benefit from being part of a heterogeneous group of students their own age. As the curriculum becomes increasingly more conceptual, however, and as the pace of the introduction of new concepts increases, these students may experience considerable failure or show high levels of frustration. To support the building of self-esteem in these students, teachers should ensure that they are provided with and use materials that look similar to what the rest of the class is using. In addition, classroom resources and materials should reflect the chronological age of the student, regardless of the expectations set out in them or being addressed. Some students, in addition to their cognitive disabilities, have physical

and sensory disabilities that further challenge their abilities to learn and to exercise control in their environment.

### Strategies and Suggestions Related to the Classroom Environment

Like all students, children with CD require a supportive and encouraging learning environment that highlights and celebrates their strengths. The optimum learning environment for all students is predictable and safe from situations that may humiliate or embarrass them. The teacher could:

- Set expectations for the student that are similar to those for all students in the class;
- Model and foster a climate of acceptance for all students;
- Arrange the student's timetable to enable him or her to access classes minimize as far as possible the number of transitions that occur in the school day and as the student moves from the junior to the senior;
- Reduce distractions in the classroom;
- Provide the student with preferential seating or seating that is appropriate to his or her sensory needs (e.g., away from doors and windows and near the blackboard);
- Arrange seating to place a student at risk of being isolated next to supportive peers;
- Provide the student with a headset to muffle noise, if required.

### Strategies and Suggestions Related to Behavior

Students with CD may demonstrate a tendency to be distracted easily and may exhibit behaviors that are inappropriate in the school setting. It is important to understand that all behavior is communication. By structuring a learning environment that discourages inappropriate behaviors, teachers can minimize disruption, increase learning time, and help all students develop self awareness and self-control. The teacher could implement support programmes for the student such as peer tutoring, "circle of friends", co curricular coaches, buddy



systems, and recess support; teach the student self-advocacy skills (e.g., asking for help, explaining his or her strengths and needs through specific gestures if speech is an issue); provide frequent opportunities for the student to learn and practice appropriate behavior in social situations; establish and maintain consistent routines and classroom rules and reinforce positive behavior.

### Strategies and Suggestions Related to Organization

Among the most important skills needed by these students especially those with mild CD are those required to become independent learners: the abilities to manage time, organize their workspace, and learn study and test preparation skills. The teacher could teach the student the use of personal organizers (e.g., a personal timetable that colour-codes or highlights important information, a checklist for materials required for learning a homework journal or communication book); teach the student time-management strategies (e.g., to use a watch or a clock to follow a schedule); record up-coming assignments and events on a calendar for the student; teach simplified note-taking techniques (e.g., using a highlighter to identify main ideas or facts, outlining); provide advance organizers to demonstrate the key and subsidiary parts of lessons; teach the student to use folders for finished and unfinished work; teach the student to use graphic organizers, mapping, and semantic webbing techniques; teach the student by modeling/demonstrating different study techniques; teach test-taking skills for multiple-choice, fill-in-the-blank, and essay-type tests and simultaneously give the student instructions orally, visually and pictorially.

### Strategies and Suggestions Related to Motivation

All students require opportunities to demonstrate their strengths, to experience success, and to participate in learning opportunities that are similar to those of their peers. Learning can be enhanced through a variety of teacher-directed, self-directed,



and collaborative group situations, as well as highly motivational instructional materials. In addition, teachers should provide students with learning opportunities in the context of real-life situations. The teacher could:

- Offer the student hands-on learning opportunities (e.g., teaching science concepts through simplified experiments);
- Use real-life experiences as learning opportunities (e.g., tiffin time, setting up audio-visual equipment in the classroom);
- Use technology and software as tools for instruction, additional practice, or to demonstrate learning;
- Provide the student with frequent opportunities for large- and small-group learning, peer assistance, and/or peer tutoring;
- Encourage the student to use tools that make automatic corrections (e.g., word processing software with automatic spellers);
- Offer compatible incentives and rewards for effort and good work;
- Focus on the student's strengths and abilities.



## Strategies and Suggestions Related to Lesson Presentation

In general, these students take longer time to learn as efficiently as possible. Because it may take some students longer to learn some or part of the material in the curriculum, it is essential to maximize time on task and to provide students with extended and multiple opportunities for practice. The teacher could “chunk” the skill or instruction into smaller steps; sequence the steps involved in learning a skill or concept or in completing a project (e.g., labeling items as one, two, three and so on); use a number of instruction methods (e.g., make use of concrete materials, visual aids, tactile/kinesthetic aids, captioned videos, and software; read material aloud); teach the same concepts and skills in many situations, so that the student them as generalized; point out the relationships between ideas/concepts and vocabulary; provide opportunities for the student to work in pairs, collaborative learning groups, and small instructional groups, and with a peer tutor; provide extended time for the student to complete assignments; provide the student with many opportunities for practice, using techniques such as verbal rehearsal, mnemonic devices, graphic organizers, and rote memorization; keep homework to a minimum and ensure that it has a real-life application; schedule in “response time” to allow the student to provide oral answers to questions asked; speak at a slower rate during instructional time; call the student’s name before asking him or her a question; teach the student the meaning of key directional words; provide reproducible instructional material instead of requiring the student to copy it and colour - code material by subject / skill e.g. reading, writing, etc.

## Strategies and Suggestions Related to Independence

As part of their classroom experience, students need to be provided with opportunities to acquire skills moving towards becoming independent, to self-advocate, and to live and work in the community. The teacher could use hand signals as cues and reinforcers for behavior (e.g., for getting the student’s attention, to let the student know that he or she has given an appropriate response); use both direct instruction and support to help

the student move towards self assessment, goal-setting, self-monitoring, and self-reflection; and develop partnerships with community agencies to assist the student in achieving an appropriate level of independence for community living.

## Specific Skill Strategies and Suggestions Related to Speaking

To develop speaking skills, the teacher could encourage students to practice speaking for different purposes (e.g., asking for clarification, using the telephone, initiating conversations, taking turns in conversations); learn appropriate ways to express his or her needs and anxieties use language that elaborates and clarifies as much as possible; practice speaking to a partner, then to a small group, then to a larger group; develop self-talk or thinking-out-loud strategies; repeat directions; repeat or summarize important information frequently; and make presentations using slides, pictures, or concrete materials instead of text.

## Strategies and Suggestions Related to Reading and Spelling

To develop reading skills, the teacher may encourage students to:

- Develop a picture booklet of new vocabulary;
- Keep a booklet of new words classified into categories(e.g., hobby words, special subject words, special indicator words etc);



- Build a sight vocabulary of words and phrases used for survival, found in the environment, and used frequently in everyday life;
- Read using both print and non-print sources (e.g., read-aloud programs, stories on tape);
- Write for a specific real-life purpose (e.g., shopping list, to-do list, etc);
- Use a variety of writing organizers;
- Use speech-to-text software;
- Use a one-minute-blitz strategy, where a student writes for a minute, then counts and charts words, with the goal of increasing, with continued practice, the number of words written in a minute;
- Use a multi-sensory approach to word study; use phonemic patterning strategies to improve spelling (e.g., distinguish root words, suffixes, prefixes, word families);
- Use a pencil grip.

### Strategies and Suggestions Related to Mathematics

To develop mathematics skills, the teacher may encourage students to use real-life situations to learn and practice concepts, computations, and skills; use an abacus, concrete materials, number lines, manipulatives, charts, and calculators as aids; use pictorial clues; use dotted lines or graph paper to line up math problems, to determine place value, or when adding and subtracting two-digit numbers; colour-code numbers in place value tasks and use sample sheets that illustrate problem types and that explain difficult words.

### Strategies and Suggestions Related to Assessment

These students require frequent opportunities to demonstrate their learning using methods that reflect their strengths. The teacher could use alternative forms of assessment (e.g., oral tests, demonstrations, tape recording) and extend the time allowed to the student for completion of assignments or tests. Wherever possible provide the student with word processors, calculators, and other learning aids during tests. Allow the students to answer orally; use pictorial cues for instructions; highlight key words in questions; give the student

frequent short quizzes in lieu of long tests that cover a broad base of content; change question types from essay to fill-in-the-blank, multiple-choice, short-answer, etc.; give the student practice questions; simplify the wording of test questions, without changing the intent of the expected responses; and read test questions aloud.

### Assessment Accommodations

To provide accommodations for a student with CD the teacher could:

- Adapt the assessment format (e.g., make it an oral test, a practical demonstration, a tape-recorded test);
- Allow the student to write down the main points and to expand on them verbally;
- Allow the student to use assistive devices and technology resources, such as a speech synthesizer, speech-to-text software where appropriate;
- Allow the use of augmentative and alternative communication systems;
- Divide the test into parts and give it to the student one section at a time or over a period of days;
- Provide the student with a quiet location, free from distractions;
- Allow the student additional time, when required, to complete the tests;
- Read or clarify questions for the student and encourage the student, without assisting or providing the response, to rephrase questions in his or her own words;
- Highlight key words or instructions for emphasis;
- Allow the student flexibility, as appropriate, in the number of questions to be answered relating to the same skill;
- Allow audio taped responses or verbatim scribing of responses to test questions;
- Provide prompts for the purpose of drawing the student's attention back to the test.

To conclude regular schools and classrooms genuinely adapting and changing to meet the needs of all children, as well as celebrating and valuing differences are progressive and caring environments which optimize teaching and learning.



# NEWS FROM THE STATES

## Curriculum Adaptations for CWSN by SSA- Chandigarh

Nidhi Goyal\*

Full inclusion is the integration of all students, even those that require the most substantial educational and behavioral support and services to be successful in regular classes and the elimination of special, segregated special education classes.

In inclusive set up modifying existing general curriculum is an effective way to create more accessible learning environments to support all students and their teachers in various educational contexts. There are many terms in use regarding changes made to curriculum, such as enhancements, accommodations, overlapping, and adaptations. Frequently, teachers enhance curriculum with additions of instructional strategies. Frequently enhancements are created to evaluate and teach adequate background knowledge in preparation for a new task. Additionally, teachers incorporate a variety of instructional materials and procedures to meet students' needs, including the use of co-teaching, and/or instructional collaboration.

Sometimes a student may need to have changes made in class work or routines because of his or her disability. For example allowing a student who has trouble writing to give his answers orally is an example of an accommodation. This student is still expected to know the same material and answer the same questions as fully as the other students, but he doesn't have to write his answers to show that he knows the information.

In U.T. Chandigarh, a CWSN is educated in "full inclusive" setting. The students with special needs are always educated alongside students without special needs, maintaining appropriate supports and services.



Students in an inclusive classroom are placed with their chronological age-mates regardless of whether the students are working above or below the typical academic level for their age. Also, to encourage a sense of belonging, emphasis is placed on the value of friendships. Teachers often nurture a relationship between a student with special needs and a same-age student without a special educational need. Another common practice is the assignment of a buddy to accompany a student

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with special needs at all times (for example in the canteen, on the playground, on the bus, going to washroom and so on). Such practices reduce the chance for elitism among students in later grades and encourage cooperation among groups.

Teachers use a number of techniques to help develop inclusive classroom. These are:

- Using games designed to build inclusion.
- Involving students in solving problems.
- Sharing songs and books that teach inclusion.
- Openly dealing with individual differences by discussion.
- Assigning classroom jobs that involves all students in spite of differences.
- Teaching students to look for ways to help each other.
- Encouraging students to take the role of teacher and deliver instruction (e.g. read a portion of a book to a student with severe disabilities).
- Focusing on the strength of a student with special needs (like drawing, painting, music, dance, sports activity etc).
- Take breaks when necessary.
- Create an area for children to calm down.
- Create a self and welcoming environment.
- Set ground rules and stick with them.
- Help establish short-term goals.
- Design a multi-faced curriculum keeping in mind the individual differences and special needs.
- Communicate regular with parents and/or caregivers.
- Seek support from other special education teachers.

Curriculum modifications although are being done keeping in view the nine principles of adaptations (quantity, time, level of support, input, difficulty, output, participation, alternate goal, substitute curriculum), yet the learning indicators developed by National Council of Education Research and

Training (NCERT) for all the elementary grades is kept as base for framing the goal for learning in all the skill areas. Curriculum adaptations, wherever required, are being done in a collaborative manner by a team of subject teachers, class teacher and a resource teacher by following the steps detailed below:

- Identify the child's individual educational objectives to be emphasized during general classroom activities.
- Articulate the expectations for the student's performance.
- Determine the content that needs to be taught.
- Determine how to teach i.e. if, without modification, the student can actively participate and achieve the same essential outcomes as non-disabled classmates. If the student cannot achieve the same outcomes, then undertake appropriate adaptations as detailed below:
  - Select the structure of instruction i.e. how the participation of the CWSN can be increased in the classroom activities.
  - Select lesson i.e. how the participation of the CWSN can be increased by changing the format of the lesson e.g. activity-based lessons, games, simulations, role-plays etc.
  - Select student specific teaching strategies required in the class.
  - Development of modified Teaching Learning Material.
  - Examine the availability of support structure in the class.
  - Make necessary changes in the physical and social environment of the classroom e.g. Reading a text to a student, highlighting the important concepts in a textbook, having the student listen to a taped textbook, using enlarged print, using an assistive technology device, using visual cues such as picture and/or word schedules for those who have difficulty staying on task.

If the above adaptation strategies are not effective, design an alternative activity. Evaluation on the basis of the adaptation is done.





It is important to correlate adaptations with the Individualized Education Plan (IEP) and curriculum adaptation should not be done only for the sake of adaptations but, to meet the student's needs as identified on an IEP. As such, the curriculum of the child is constantly looked into and it is ensured that the CWSN on IEP is gaining benefit from learning in the inclusive classroom set-up as incidental learning occurs in the class which makes it different from special class-room setup. Further adaptations are done in the inclusive classroom on the principle of partial participation i.e. with different objectives within the same activity (the student with an IEP works with all the other students in the classroom activity when possible but, with a different learning objective from the other students).

### For Example

1. Understanding the effect World War II has on the present rather than knowing the names and dates of key battles.
2. Completing an assignment of addition by doing single digit addition then the addition sums of carry forward.
3. In a social studies lesson, we expect a student to be able to locate the colors of the states on a map, while other students learn to locate each state and name the capital.

Alternative or substitute curriculum also plays an important role in the inclusive setup. This is sometimes referred to as functional curriculum as it usually involves the life skills. The decision to use alternative/substitute curriculum is a major change and is reflected on the IEP of the child specifically of children with visual and hearing problems.

Children with intellectual disabilities require substitute curriculum of different nature, at times their academic curriculum also needs to be substituted since they cannot keep pace with the skills being learnt by rest of the class. During such a situation specially designed worksheets help the teachers in the class and try to accommodate the needs, but such type of CWSN always remains a challenge for the teacher.

### Some of the examples of inclusive class with necessary modifications:

Chetan is an 8th grade student who has learning disabilities in reading and writing. He is in a regular 8th grade class that is team-taught by a general education teacher and a Resource teacher. Modifications and accommodations provided for Chetan's daily school routine include the following:

1. Chetan does shorter reading and writing assignments.
2. Chetan's textbooks are based upon the 8th grade curriculum but at his independent reading level (4th grade).
3. Test questions are read /explained to him, when he asks.
4. Chetan gives his answers to essay-type questions by speaking, rather than writing them down.

Surinder is a child with low vision, large print books are provided to him and his question papers and learning material modify in large print.

Anisha is a child with intellectual impairment has lack of vocabulary, which is the main problem and cannot use one word to multiple things. As such, attention is paid that her curriculum is modified in such a way that she can use one word for only one thing i.e. in simple language and use of single language. Further, during evaluation instead of long questions answers she is evaluated only on short question, true or false, fill in the blanks, etc. by giving additional time as per the concessions provided by Central Board of Secondary Education (CBSE). Inputs are provided in the class with the help of charts, videos, pictures, flash cards, 3-D model, videos of different concepts, examples with the help of sign language, place students in cooperative groups, etc.

Assessment of some projects if is being done by verbal questions only then it is made sure that she can answer the same in writing.

Harmandeep Kaur is an 8 year child with mild intellectual difficulties. She has problem in fine



motor activity, speech and very shy. As a result she faces problem in reading, writing. In order to include her in the class, following steps of adaptations were taken:

1. Introduced buddy concept in the class.
2. Kept the lower level learning goal in comparison to the class i.e. if the whole class doing 2 to 10 tables in whole year, Harmandeep can learn 2 to 4 tables in whole year.
3. She is allowed to read along with other student or teacher and also given extra time for reading.
4. Since she usually takes more time to learn any activity as compared to other students,

time allotted and allowed for learning, task completion, or testing was increased.

5. The amount of personal assistance to keep her on task or to reinforce or prompt has been included in the class room activity.

Inclusion “is understood more broadly as a reform that supports and welcomes diversity amongst all learners.” So, steps are being taken to eliminate discrimination and provide accommodations for all students who are at a disadvantage because of some reason other than disability also. The goal of full inclusion cannot be achieved without the support of school staff, teachers and school principal in particular.

# Curriculum Adaptations for CWSN by Rajasthan SSA

Naveen Kumar Gautam\*

**S**SA Rajasthan, under the guidance of The Right of Children to Free and Compulsory Education (RTE) Act, 2009 is offering quality and inclusive learning opportunities to Children with Special Needs (CWSN). In Rajasthan a total of 117911 CWSN are enrolled as per the DISE 2014 - 15. National Curriculum Framework (NCF) 2005 emphasized the significance of making the curriculum “an inclusive and meaningful experience for children”. The focus was on a fundamental change in how we think of learners and the process of learning. Child - centered education took a key place.

## Need for Curriculum Adaptation

Children with special needs have problem in accessing the general curriculum when they participate in a lesson or subject. Therefore there is gap between CWSN’s performance and that of their peers. CWSN lack the necessary skills to keep pace with the rest of the class. The need of children varies from individual to individual. Some CWSN perform at the same level as their peers with no or minor adaptations, whereas some require adaptations in content of lesson or subject. Therefore, curriculum adaptation is the way by which CWSN can participate in a mainstream class and be able to achieve the learning outcomes.

## Curriculum Adaptation

Curriculum adaptation is a process of modifying the existing prescribed curriculum to meet the needs of all children. It enables the teaching team to welcome learners of all abilities. The curriculum followed for children with special needs is same with minimum adaptations in the learning content. It uses a learning friendly environment, appropriate



learning approach, adaptation in learning aids, and flexibility in evaluation system. Making appropriate adaptations or modifications to the curriculum is essential to provide good quality inclusive education.

Schools play vital role in responding to diversity among children to facilitate participation by all students in the cultures, curricula and communities. Schools facilitate inclusion for all children by providing appropriate accommodations in the classroom. The school culture, leadership and decision-making play an important role for accommodations and adaptation. The accessible school building welcomes children with special needs. Simple adaptation of playgrounds, equipment and rules can make activities and games accessible to all children in the school. Children can achieve good performance in co-curricular activities, sports, yoga and dance.

Some teachers have sympathy for the children with special needs, whereas some teachers empathize

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with them and include them in prayers and other co-curricular activities. Teachers also make non-disabled children mentors to support CWSN in many activities and take care of their CWSN friend. It is important for teachers to be sensitive to the needs of CWSN and treat them at par with other children so that a sense and feeling of belongingness and community is created in the classroom.

The success of inclusive education depends on what takes place minute-by-minute in regular classrooms. The curriculum for an inclusive classroom must be accessible to all learners, including children with special needs to the maximum extent that is possible. An inclusive classroom has students who are functioning at different level hence multi-level teaching is required. The teaching strategy is an important factor in the inclusive classroom.

Teachers can use play-way method, provide concrete experiences, facilitate learning by involving children with special needs in groups, encourage peer-group learning and modify method of teaching to suit the individual learning styles of children. Teacher can use written method in place of oral for hearing impaired, oral method for children with visual impairment, etc as per level of children with special needs during evaluation. The seating arrangement of children is a very important part of an inclusive class room. Teaching learning material should be appropriate to children with special needs to understand the content of lesson. More inclusive the classroom, more productive the learning experiences for all children.

The learning level varies from child to child. Some of the children can achieve the curriculum with no or minor adaptation



whereas some may require high level of adaptations in subjects. Textbooks with large print for the children with low vision and audio/Braille books for the children with blindness should be provided. A change is made to the teaching method to provide a student with access to information. Instructional level, content and performance criteria may be modified for meeting standards during accommodation. Accommodations include enlarging the print, books in Braille/DAISY format, providing oral versions of tests, and using calculators, etc. Teacher designed appropriate instructional strategies based on strengths and needs of individual CWSN should also be promoted.

### **Guidelines for Relaxation in Evaluation System for CWSN**

SSA- Rajasthan in collaboration with State Institute for the Education Research and Training (SIERT), Udaipur developed “Curriculum Adaptation and Relaxation in Evaluation System Guideline” which is applicable to all children with special needs. The document (Circular/Notification) was published by the Government of Rajasthan in the form of a Government Order in 2014. The following are some highlights of documents:

1. If Government certification of disability is currently not available for conditions such as autism and learning disability, the diagnostic assessment report from an expert shall be considered. Alternatively, for evaluation purpose, certificate issued by Headmaster/Principal of a special school can also be considered for extending benefit of these provisions.





2. A “compensatory time” 20 minutes per hour will be given during examination for CWSN.
  3. The CWSN must be given the option of choosing the mode for taking the examinations i.e. in Braille, computer or in large print or even by oral /recording the answers as the examining bodies can easily make use of technology to convert question paper in large prints, e-text, or Braille and can also convert Braille text in English or regional languages.
  4. School/examination authority shall provide for the use of assistive devices (e.g. talking calculator, Taylor`s frame, Braille slate, Brailers, abacus, geometry kit, Braille measuring tape); low-tech augmentative communication devices (e.g. communication chart, sign systems, alphabet boards, help cards, white boards, bold markers) as well as high-tech communicators (e.g. I-pads and computers) or anything else as required by the student.
  5. Evaluation system will accommodate at least 20% marks for plus curriculum activities like daily living, orientation and mobility, physiotherapy, social and behavioral and home science, improvement in functional skills as these children require to invest more efforts in these areas.
  6. In language paper, relaxation of 10% in passing marks will be allowed in case of children having difficulties with languages and communication as in case of Autism, mental retardation, cerebral palsy, hearing impairment or with multiple disabilities.
  7. Bonus marks of maximum of 20% will be added to final grade for those children who are involved in co-curricular activities like music, sports, arts and crafts, paintings etc. Following criteria will be adopted-
    - A. Children participating at State / National level - 20% marks
    - B. Children participating at District/Divisional level - 15% marks
    - C. Children participating at Block level - 10% marks
    - D. Children participating at School level - 5% marks
- In addition to above alternative provisions shall be adopted to meet specific needs of different children having different disabilities. Alternate question should be provided for smooth evaluations of children with specific needs. These are given below:

Category	Alternate Options	Adaptation Required
Visual Impairments	<p>Complex, descriptive, geography, geometry, drawing maps, graphs or any question requiring visual inputs.</p> <p>Any question requiring multiple steps of construction in equations or geometry should be avoided.</p>	<ul style="list-style-type: none"> <li>• There should be provision supplementary question/ or relaxation in word limit.</li> <li>• Should have more objective based question, (MCQs) fill in the blanks, true/false, match the following, short answers, one word answers, etc.</li> <li>• Tactile material must be used, Evaluation techniques must involve methods of touch, oral and doing, give, multi-sensorial Teaching learning materials such as flashcards, pictures and 3D objects.</li> <li>• Marks should not be cut for punctuation, spelling and grammatical errors (except language papers).</li> <li>• In case of visual based questions, the candidate should be given alternative text based on non-visual questions. A facility for the request for the same (non-visual alternative questions) needs to be provided at the time of filling up the examination form/course registration form. The candidate will have the freedom to opt for the visual questions if they so choose. The said preference will be recorded in the appropriate form.</li> <li>• Breaks during the examinations may be allowed to counter fatigue.</li> </ul>



Category	Alternate Options	Adaptation Required
Hearing Impairments	Complex words of question framing, descriptive, or any question require hearing inputs or audio.	<ul style="list-style-type: none"> <li>• There should be provision of supplementary question/ or relaxation in word limits, answer should not exceed 100 words per question.</li> <li>• Should have more objective based question, (MCQs) fill in the blanks, true/false, match the following, short answers, one word answers, arrange words in order, etc.</li> <li>• For any oral examination to be conducted, sign language or gestures/ facial expressions should be used.</li> <li>• Marks should not be cut for punctuation, spellings and grammatical errors.</li> <li>• Question to be answered using imagination should be avoided.</li> <li>• Exemption should be given from studying of supplementary books (for class 6th, 7th and 8th).</li> </ul>
Speech Impairment	Complex words of question framing, descriptive or any question which requires speech inputs or audio or oral output.	<ul style="list-style-type: none"> <li>• There should be provision of supplementary questions.</li> <li>• Should be exempted from oral examination.</li> </ul>
Intellectually Challenged	Complex wordings of question, descriptive, geography, geometry, drawing maps, graphs, paintings, measurements etc should be avoided.	<ul style="list-style-type: none"> <li>• There should be provision of supplementary questions/ or relaxation in word limits, answer should not exceed 100 words per question.</li> <li>• Evaluation system must have more objective based question, fill in the blanks, short answers type (one word answers) e.g. while answering essay type questions, and marks should be given if answered in key points not on the length of the answer.</li> <li>• Tactile material must be used. Evaluation techniques must involve methods of touch, showing, pointing, and use of multi-sensorial Teaching learning materials such as flash cards, pictures and 3D objects.</li> <li>• Marks should not be cut for punctuation, spellings and grammatical errors.</li> <li>• Marks should not be cut for incomplete drawings or graphs, decimal values concept or child should be allowed to point out required area instead of writing or leveling of legends.</li> <li>• Alternate evaluation techniques should be applied for different children e.g. if a child does coloring of maps instead of writing should be considered.</li> <li>• There could be some children who can't be educated, they should be evaluated for their functional abilities.</li> </ul>

Category	Alternate Options	Adaptation Required
Physically Challenged		<ul style="list-style-type: none"> <li>• Evaluation system must have more objective based question, fill in the blanks, short answers type, one word answers, etc. For example, while answering essay type questions, marks should be given if answered in key points not on the length of the answer.</li> <li>• For any examination requiring acting skills to be conducted, sign language or gestures/ facial expressions should be used.</li> <li>• Evaluation techniques must involve methods of touch, show, point, give flashcards, pictures and 3D objects.</li> <li>• Marks should not be cut for incomplete drawings or graphs, decimal values concepts, or child should be allowed to point out required area instead of writing or leveling of legends.</li> <li>• Answer papers should have sufficient thickness as there could be some children with drooling.</li> </ul>
Autism	<p>Complex wording of questions framing, multiple instruction, descriptive or abstract language type.</p> <p>Drawing maps, graphs, or question requiring multiple sensory questions.</p> <p>Assignments requiring 'reading aloud' may be avoided.</p>	<ul style="list-style-type: none"> <li>• There should be provision of supplementary question/ or relaxation in words limits, answer should not exceed 100 word per question.</li> <li>• Tactile material must be used. Evaluation techniques must involve methods of touch, showing, pointing, and use of multi-sensorial Teaching learning materials such as flashcards, pictures and 3D objects.</li> <li>• Flexibility to exempt from oral examination on case to case basis.</li> <li>• CCE format should have provision to record such responses for future reference.</li> <li>• Marks should not be cut for punctuation, spellings and grammatical errors.</li> <li>• Marks should not be cut for incomplete drawings or graphs, decimal values, concepts or child should be allowed to point out required area instead of writing or leveling of legends.</li> </ul>

Category	Alternate Options	Adaptation Required
	Children are exempted from studying specific chapters as mentioned in curriculum adaptation papers.	<ul style="list-style-type: none"> <li>Marks should not be cut for writing e.g. neatness of handwriting or drawings, or writing between parallel lines.</li> <li>Question to be answered using imagination or abstract terms (e.g. good/bad) should be avoided like paintings, write an essay etc.</li> <li>All oral directions given during exams should be written on the board in simple language/ one liner.</li> <li>Breaks during the examinations may be allowed to counter fatigue.</li> <li>Exemption should be given from studying supplementary books (for class 6th, 7th and 8th).</li> </ul>
Learning Disabilities	Complex wording of questions framing, multiple instruction, descriptive or abstract language type drawing maps, graphs, geometry, arithmetic or question requiring multiple sensory inputs.	<ul style="list-style-type: none"> <li>Evaluation system must have more objective based question, fill in the blanks, short answers type, one word answers, etc. For example, while answering essay type questions, marks should be given if answered in key points not on the length of the answer.</li> <li>60% of the questions in exams may be evaluated based on oral response given by child.</li> <li>Language of question should be simple and easy to understand.</li> <li>Marks should not be cut for punctuation, spellings and grammatical errors.</li> <li>Compensatory time of 20 minutes for each hour should be provided as specified in point number 08 of these guidelines.</li> <li>Question paper may be explained by invigilator for better understanding by children.</li> </ul>
Multi- Sensory Impairment		<ul style="list-style-type: none"> <li>Evaluation techniques must take into account the multiple impairments of a child and should include appropriate and suitable combinations of exemptions as stated above for each specific disability.</li> <li>Tactile material must be used. Evaluation techniques must involve methods of touch, showing, pointing, use of multi-sensorial Teaching learning materials such as flashcards, pictures and 3D objects, adapted TLMs like grippers, slanting boards, and modified stencils.</li> <li>Depending upon the need, children should be allowed for multiple attempts to face exams for a particular subject.</li> </ul>



Inclusive education means that all students attend and are welcomed by their neighbourhood schools in age-appropriate, regular classes and are supported to learn, contribute and participate in all aspects of the life of the school. Inclusive education is about how schools, classrooms, programs and activities are developed and designed so that all students learn and participate together. It's important because diversity is valued. In inclusive schools all students learn to live alongside peers. They learn together; they play together; they grow and are nurtured together. Moreover a school culture of respect and belonging is fostered. Inclusive education provides opportunities to learn about and accept individual differences, lessening the impact of harassment and bullying. It's all about positive outcomes.



# Curricular Adaptations for CWSN by Tamil Nadu SSA

Uma Maheshwari\*

Curricular Adaptations are changes permissible in educational environments which allow the student equal opportunity to obtain access, results, benefits, and levels of achievement. These adaptations consist of both accommodations and modifications. Some curricular adaptations do not fundamentally alter or lower standards or expectations in either the instructional or assessment phases of a course of study and can be designated as “accommodations.” These accommodations provide an opportunity to demonstrate mastery of performance standards. Some adaptations can alter or lower standards or expectations and can be termed “modifications.” These modifications, although providing access,



will necessitate careful selection of assessment components to achieve accountability for performance.

A student may be learning the same curriculum as others, but require substantially altered materials or instruction much lower in the developmental sequence of general curriculum in order to progress towards academic mastery. The Individualized

Education Plan (IEP) team will consider which, if any, assessment components, with modifications, validly measure progress. Additional, multiple measures of progress may also be selected by the IEP team. A student may be participating in activities in the classroom through the use of highly modified curriculum. The goal of this participation may be to access the environment in order to work on alternate functional curriculum, with goals to achieve maximum independence and quality of life. Highly modified curriculum may be the means of achieving inclusion in the activities to achieve other outcomes. The IEP team may therefore determine that participation in general assessment does not meaningfully measure educational achievement. Assessment for this student will be an alternate assessment that validly measures the intended outcomes of the instruction. Additional, multiple measures of progress may be also selected by the IEP team.

Accommodations are changes in course content, teaching strategies, standards, test presentation, location, timing, scheduling, expectations, student responses, environmental structuring, and/or other attributes which provide access for a student with a disability to participate in a course/standard/test, which do not fundamentally alter or lower the standard or expectations of the course/standard/test. Modifications are changes in course content, teaching strategies, standards, test presentation, location, timing, scheduling, expectations, student responses, environmental structuring, and/or other



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attributes which provide access for a student with a disability to participate in a course/standard/test, which do fundamentally alter or lower the standard or expectations of the course/standard/test.

Curriculum adaptation is an on-going dynamic process that modifies and adapts the prescribed program of studies to meet the learning requirements of a student with special needs. It enables the teaching team to welcome learners of all abilities and ensures that every student is challenged to learn. Inclusion of a student with special needs is the collective responsibility of the entire school community, not the sole duty only of the classroom teacher or education assistant.

### Importance of Curriculum Adaptation

Adaptations may imply the necessary adjustments needed for the inclusion and effective participation of students with special needs in all school activities. Curriculum adaptation might be needed in every part in the student's day. Learning, socialization, independence and safety are assured for the student when all school staff is aware of their teaching roles in the classroom as well as in the halls, library, playground and lunchroom. Educators are encouraged to be open about their feelings and concerns and to welcome input from fellow staff members, parents and other professionals. Adaptations may be practices in inclusive classrooms often occur when teachers differentiate instruction especially when teachers decide to conduct lessons, mathematics or writing, which meet individual learner's unique needs by having work on adapted assignments.

In the year 2014-15 as per Government of India's guidelines and as per instructions given by State Project Director and Joint Director of SSA-Tamil Nadu, curriculum adaptation training was implemented in all the districts in which 10,000 primary level teachers participated. Training plan was given by State Resource Group members and experts in the field of disability. Education for All is the prime motives of Sarva Shiksha Abhiyan (SSA). Special children have the right to education.



In order to educate them well, SSA takes strenuous efforts to conduct training to the teachers.

### State Level Workshop

To begin with, the State conducted a State level workshop for training master trainers on curricular adaptations. The purpose of the workshop was to provide the required expertise to the mainstream school teachers under the SSA on:

- Different Disabilities.
- Coordinating with the special educators in implementing the adapted curriculum for the education needs of each child with disability.
- Developing IEPs.
- Adapting the lesson to suit the needs of CWSN.
- Planning and selection of those concepts in the lesson that are hard spots for the children.
- Accommodations to be made for children who do not all perform uniformly, who have additional difficulties and children whose pace of performance may not be uniform in all the areas.

Based on the above, district level training was also conducted in a cascade mode.

### Curriculum Adaptation Training 2014-15

Curriculum adaptation training has been organized by SSA in the year 2014-15 for the regular teachers. Accommodation, adaptation, parallel curriculum outcomes and

overlapping curriculum as modification strategies were covered in the training. The regular teachers were exposed to the concept of curriculum adaptation, remedial teaching, preparing teaching learning material and class room adaptation for children with specific learning problems. The teachers were also told on how to specifically teach children with autism, low vision hearing

#### PURPOSE OF THE IEP

- Assessing
- Setting Goals and objectives, teaching of the lesson.
- Suitable teaching learning materials and teaching strategies.
- Evaluation and assessment
- Moving on to the next stage of learning.







impairment, attention problems, locomotor disability and intellectual challenges. Teachers also prepared IEP for various disabilities.

The teachers felt that curriculum adaptation should be made an important part of all teachers training programmes on inclusive education. For inclusive teaching, it is vital that adaptation of the curriculum is carried out to meet individual needs of children with disabilities.

### Implementation in School Level

***“Inclusive teachers maximize the opportunities for all students to learn even though they may be learning at different levels”.***

### Visual Impairment

B. Raja who is studying in class 2 has a problem of low vision. He has been given coaching by the teachers with help of Large Print. He is able to learn the lessons in an easy way. Teachers find it very easy to teach him lessons He was provided with Magnifier in the year 2014 - 2015.

### Teacher Feed Back

**“I never see what has been done. I learnt well what remains to be done”** I learnt the following adaption method for a visually impaired child in regular class room in the training provided by SSA:

- To manipulate lighting and Increase contrast.
- To use finger, paper clip as a marker to point out the beginning.
- To use coloured marker in margins as visual cues.
- Providing pause in the reading and repeated reading.
- Teaching the child to slide his/her finger under each word as they are read without lifting it.
- Teaching the child to use a ruler under lines to single them out.

### Physical Disabilities/Orthopedically Impairment

In Devamar Primary School, there are 4 Special Children. Among them there is a special child named Mareeswari who has no fingers both in her hands and feet.



Through she has major problem of no writing skill or the capacity developed the interest of learning lessons from her teachers who are taking special care and individual attention. The training the teacher attended has been induced her to teach this special child in a different and interesting manner by using prominent TLM. She is also guiding the child to learn all the subjects



including Mathematics with the proper TLM to teach the 4 basic skills. Besides, she also ensures that the classroom is accessible. She also provides accessible seating and a table in the classroom. The teacher makes writers available for written work and for tests and exams.



Additional time is given to the child for completing assignments/exams and large grip pencils are provided. A classmate also helps in taking notes.

**For teaching the hearing impaired (HI), the teachers use the following:**



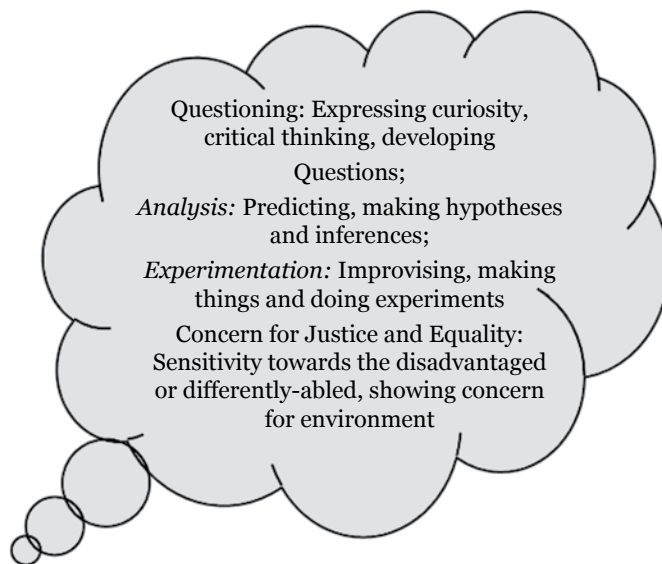
- Other senses as mediums of learning like gestures, body language, expressions, lip reading, etc.
- Adapted material such as visual or sight vocabulary to provide first-hand experience.
- Assistive devices such as hearing aid, loop system, etc.
- Sound based information method is

adapted in the classroom.

- Background noise is reduced or classroom is away from noise.
- HI students who can lip read sit in the front, near the teacher. Optimum distance for lip reading is considered to be about 6 feet.
- Face the HI student when speaking.
- Use clear speech.
- Make sure the room is well lit to allow the student with HI to see your facial expression, signing and/or lip read.

**Evaluation becomes easy for CWSN in adapting the following techniques:**

- *Observation and Recording:* Reporting, narrating and drawing, picture reading, making pictures, tables and maps;



- *Questioning:* Expressing curiosity, critical thinking, developing Questions;
- *Analysis:* Predicting, making hypotheses and inferences;
- *Experimentation:* Improvising, making things and doing experiments
- *Concern for Justice and Equality:* Sensitivity towards the disadvantaged or differently-abled, showing concern for environment
- *Discussion:* Listening, talking, expressing opinions, finding out from others;
- *Expression:* Drawing, body movements, creative writing, sculpting, etc.;
- *Explanation:* Reasoning, making logical connections;
- *Classification:* Categorising, grouping, contrasting and comparing;

**Conclusion**

Even a child with many needs is to be involved with nondisabled peers to the maximum extent appropriate. Just because a child has severe special needs or needs modifications to the general curriculum does not mean that he or she may be removed from the general education class. If a child is removed from the general education class for any part of the school day, the IEP team must include in the IEP an explanation for the child’s nonparticipation. Because accommodations can be so vital to helping children with disabilities access the general curriculum, participate in school (including extracurricular and non-academic activities), and be educated alongside their peers without disabilities.

# Adapting Teaching for Children with Intellectual Impairments

Manjula Nanjundiah\*

**T**his article focuses primarily on how to ensure that regular schools make all students including those with intellectual impairments full participate and learn to their fullest potential by adapting teaching in regular classroom with reasonable accommodations.

Out of all the types of impairments, an intellectual impairment poses greater challenges than the other types as the community, and especially the teachers' community believes that children with intellectual impairments cannot be taught in the regular classrooms no matter what. There is also a myth about these children, i.e. they can only be taught at special schools by special teachers as they are developmentally slow due to having limited intellectual functioning not only in the area of academics, but every aspect of daily routine. But the reality is the capacities of children with intellectual impairments vary from child to child and it can be evolved with time, exposure, education, interaction, participation and encouragement. Hence inclusive education is very crucial for these children for their development and living.

In spite of the SSA has been adopted a 'zero rejection' policy, where every child with special needs, irrespective of the kind, category and degree of disability should be enrolled in the mainstream schools, the present system of education still excludes many children specially children with National Trust (NT) related disabilities (Intellectual disability, Autism, Cerebral Palsy and Multiple disabilities). Majority of these groups of children's names are there in the mainstream schools' register as they are enrolled under Home Based Education (HBE) programme under SSA.

The HBE was legally approved as an option for these groups of children with severe and multiple disabilities by the Right of Children to free and Compulsory Education Act (2009) in Amendment (2012). The home-based education can be used as a preparatory activity to eventually send children to schools.

In this situation, the State Govt. should take the responsibility to provide education to these

## A Case of Intellectual Impairment

Manoj was a 10 year old boy with intellectual impairment born to parents belongs to middle class family in a small town of Karnataka. He was the only son born after 11 years of their marriage and was much loved by his parents. They did not notice developmental delay in their son in the beginning but they came to know later through resource teacher during her home visit. She trained the boy at home with his mother and grandmother's help for one year.

He was enrolled in the Govt. Higher Primary School in his town and resource teacher taught him on a daily basis to learn to participate in school activities. He was performing well in school activities with resource teacher support but slow in comprehending academic subjects. By the time he was promoted to 3rd standard, he became independent in his daily living activities and was coming to school on his own from his house. Resource teacher's visit also reduced. But this did not deter Manoj to continue his schooling as he was enjoying his friends company and liked going to school with them.

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children as Education is a human rights issue and it has become a fundamental right of every child as per the RTE Act, 2009. According to the United Nation's Convention on Rights of Persons with Disabilities (UNCRPD) 2008 to which India is a signatory, states in Article 24 on Education that, "Persons with Disabilities are not excluded from the general education system on the basis of disability, and that Children with disabilities are not excluded from free and compulsory primary education or from secondary education, on the basis of disability".

The present situation calls for establishing and strengthening School Readiness Programmes Centres (SRPCs) for high support group children as there is no access for these children to any form of education. The best option for these children is to attend the 2012-13 Karnataka model SRPCs in the regular school premises so that they can be prepared to School based education (SBE). Therefore, establishment of SRPCs at cluster level in each State is recommended. Each SRPC should have trained special teachers, therapists, assistive devices and learning resources to prepare high support group children including children with intellectual and developmental disabilities for

inclusion. These centres can also be used as resource centres for supporting children with special needs including children with intellectual impairments regularly who are placed in mainstream schools. Establishment and strengthening SRPCs was one of the 15 points recommendations given to the Education Department in Karnataka during the Karnataka State level policy consultation on School Education in October 2015. The responsibility of these centres should be owned by the State Governments for sustainability of this system.

Existing practices in the education of children with intellectual impairments emphasize their inclusion in regular schools and exposure to the regular education curriculum. Inclusion can be viewed as the placement of children with intellectual impairments in mainstream schools with supplementary supports and adaptations that allow the children to get benefit from that placement. It involves participation of children with intellectual impairment in both inside and outside classroom activities.

### School Readiness/ Pre-School Skills

The preparation or readiness is very crucial for inclusion of children with intellectual impairment in mainstream schools as these children needs to be taught and even adequate practice in survival, social, cognitive and writing skills. This can be done at preschools/Anganwadis with adequate training to teachers/Anganvadi workers for high functional ability (Educable) groups of children with intellectual impairments and low functional ability (Trainable and profound) groups of children with intellectual impairments can be prepared at well-equipped SRPCs.

Thus, preparing schools to reach out to all children including children with intellectual impairment is the need of the hour. Teachers' readiness is also a part of School readiness as every teacher should be sensitized to understand the learning difficulties of the children with intellectual impairments and must prepare to facilitate these children's learning. To ensure this, Teachers should have positive attitudes, patience and should be able to establish a rapport with them.

### The SRPCs in Karnataka

The School Readiness Programme Centres (SRPCs) in Karnataka were established in the Govt. School premises at cluster level where more number of HBE children were eligible to come to these centres during 2012-13 under SSA. The objective was to transit children with disabilities from HBE to these centres for preparing them for schools. These centres were being run by SSA through HBE volunteers and Special teachers for children with high support group. The SRPCs are bridging mechanism for CWSNs to get prepared to be in mainstream school as all children, including those with high support needs, should have the right to attend school on equal basis with others as per UNCRPD (2006), RTE (2009) and the proposed new Bill (2012).



Inclusion does not work unless students with intellectual impairments and teachers get the needed support. For example, a student with intellectual impairment may be needed support by the peer groups and resource/special teacher as per their specific needs and regular teachers may require the support of other teachers in the school and outside people/community at the large.

Therefore, school readiness, teacher readiness and community acceptance are very crucial for a successful inclusive education of children with disabilities, especially with intellectual impairment. The inclusion of CWSNs including Children with Intellectual Impairments (CWIIs) in mainstream schools should be seen in terms of physical, social, communication and curricular access and it should be an active participation both in Scholastic and non-scholastic activities.

### Curricular Adaptation

The curriculum must be inclusive as envisaged in National Curriculum Framework (2005). The same curriculum should be followed for all children including children with intellectual impairment, but with minor adaptations like small changes in learning content, learning friendly environment, appropriate learning approach, adaptation in learning aids, and flexibility in evaluation. It would be important to provide text books and curriculum in accessible formats for children with special needs.

Schools should have a responsibility of providing a flexible curriculum that is accessible to all students. The following factors needs to be considered by the regular teacher while adapting the curriculum in an inclusive classroom:

1. Teacher has to understand the learning difficulties of the child with intellectual impairment in her/his class and if it is required, plan to get special teacher advice/help (if any). For example, teachers should know that child with intellectual impairments will learn and understand far fewer things at a much slower pace than the average child, and intellectual development will always be significantly impaired. Special teacher can help regular teacher by teaching the different concepts



directly to the child with intellectual disability or advice the teacher on teaching strategies.

2. Adaptations to be made inside/outside of the classroom environment and arrange assistive devices if it is required. For example, the enrolled children with intellectual impairment should be accepted by their peer group and the regular teachers and engaged them in a respectful way in the classroom. Make the classroom learner friendly, where children can express their opinions without fear; and where they can learn to their fullest potential within a safe and welcoming environment. Arrange educational CDs, pictorial communication board/charts/flash cards, toys, building blocks, puzzles, etc as per the specific needs of the children. The charts, puzzles and flash cards should be made attractive with bold and bright colours.
3. Child's level and expected outcome to be considered while selecting the content from school subjects and adapting the teaching methods as per a child's needs. For example, in science subject, it is not appropriate to give all concepts at a time. Instead it can be reduced to the specific period – while giving information about sensory organs, introduction of sensory organs should be done first and then their functions through self experience. A wide variety of teaching methods and strategies can be employed in the teaching so as to cater for students' individual needs. Task analysis can be very useful in teaching students with intellectual impairments in inclusive classroom.





### Useful Teaching Strategies

- Teach students in small groups and one-on-one as and when required with the support of school aid/volunteer (who work with the child who require one to one support). The class can be divided into small groups or pairs for group activities and this allows teacher to facilitate learning by moving from group to group. It will be benefited students with intellectual impairment to participate in activities. They have opportunities for social interaction. It is important to keep changing the pairs to allow for the students to benefit from learning with different classmates.
- Plan simple activities according to the content; make them into smaller parts; move from simple to complex and teach step by step. Teach one step at a time to help support memorization and sequencing.
- Teach one concept or activity component at a time. Use pictures or concrete examples (real objects) to introduce new concepts wherever possible. For example, instead of explaining orally about the cereals (rice, ragi, wheat, maize, etc.). Children can be asked to bring them into the class from their home for classroom activity/teaching. It will be more effective.
- Communicate with the child in its familiar language.

- Provide more time and practice to children who require it to complete the tasks given in the class and always provide multiple opportunities to practice skills in a number of different settings.
- Learning resources should be attractive and bigger.
- Encourage learning with peer group support.
- Use physical and verbal prompting to guide correct responses, and provide specific verbal praise to reinforce these responses.
- Use social praise to enhance their participation.
- Multi-sensory (visual, auditory, kinaesthetic and tactile) learning experiences should be provided.
- More repetition is required as they have poor memory.
- Highlight key points.

The final strategy to promote inclusive schooling is to maintain flexibility and it is necessary as even the most thoughtfully designed strategies and plans sometimes are not effective and need revision.

4. Adaptations should be done to ensure the child's active participation in non-scholastic activities too. Adaptations need to be done in sports and games, art and cultural activities, social activities; etc in the rules, methods, equipments, etc. as per the specific needs of children.
5. Adaptations to be made to assess the pupil's learning.

The school based Continuous and Comprehensive Evaluation (CCE) has been followed in schools across India and in Karnataka. Majority of teachers are being trained in documenting both scholastic (subject specific areas) and co-scholastic (life skills, attitudes and values, outdoor activities) throughout the academic year for every child.

The CCE should be continuous and on-going. These are not formal tests; rather they should be planned as part of teaching to help assess the student's on-going progress towards the teaching-learning goals. It is helpful to understand how the student is learning, to what extent and whether the teaching

and curriculum goals are reaching the students. But Continuous and Comprehensive Evaluation is of benefit to children with disabilities and especially to children with intellectual impairment as it covers comprehensive development of the child. The teachers should keep in mind that the evaluation of children with intellectual impairment requires reasonable flexibilities according to their impairment condition. Some of the points to be followed are listed below:

- Teach regularly and assess regularly.
- Provide more time and provide alternative setting if it is required.
- Ask simple and direct question and object oriented questions.
- Accept answer given in small words and not expect answer in complete sentence.
- Give more priority for oral examination for children with intellectual impairment.
- Assessment at the end of teaching of the lesson helps teachers to understand how far the lesson and teaching objectives are realized.
- Allow flexibility in choosing answers, for instance, recognition and identification rather than recall, coloring the correct answer, cut and paste, matching, pointing the odd one out.

### Example of Curriculum Plan for Manoj

**Content:** While giving information to Manoj about plant, parts of the plant should be taught in first and its functions in next class.

**Time:** Allow more time for Manoj to learn the parts of the plant with his peer group.

**Individual Support:** Provide personal assistance to Manoj in the classroom. Provide shadow teacher/volunteer (if any) or peer group support to assist him to understand the parts of the plant.

**Teaching Strategy:** Use real plant to teach the parts of the plant besides the chart and puzzle of the plant parts in small groups and provide peer group support to Manoj to understand the parts of the plant by holding the plant himself. Encourage

other children in the group to interact with Manoj during group activity.

To ensure **participation** of Manoj in the classroom learning in this lesson, have a Manoj hold the plant, while teacher explain the parts of the plant to the whole class by pointing out each part of the plant.

**Feedback:** To get the feedback from Manoj at the end of the lesson, instead of answering questions in writing, allow Manoj to give verbal response and also allow him to answer by showing parts of the real plant.

**Assessment:** Expect Manoj to be able to identify the parts of the plant by using the real plant while others can know the functions of the plant parts as well. Simple worksheet of match the plant with its parts through pictorial will be helpful to Manoj to participate in the evaluation.

### Conclusion

The school readiness/pre-school skills are crucial for successful inclusion of children with intellectual impairment in mainstream schools and thus school preparedness of these children must be ensured by providing 'special training' (survival /daily living skills, cognitive, social behavior, writing skills, etc). The school preparedness can be done at School Readiness Programme Centres. The fully equipped SRPCs should be established at cluster level to facilitate children with disabilities to acquire certain skills (special training in mobility, Braille, sign language, etc) that will enable them to access elementary school as envisaged in the RTE Act. These SRPCs can also be used as resource centres for continuous support to school going children with special needs including children with intellectual impairment.

Flexible Curriculum is the key for inclusion of children with intellectual impairment. Curriculum and teaching must be sensibly adapted to help students with intellectual impairment to reach their potential in both academics and other functional areas such as independent living. They require adaptation in teaching content, procedures and learning resources (charts, models, puzzles, toys, pictures, flash cards, etc.) and they also require



peer group/shadow teacher/volunteer support in coping with mainstream education. Breaking down larger tasks into their specific component parts can be an effective technique for teaching any number of skills to students with intellectual disabilities. The language acquisition instructional strategy also helps support effective self-determination of these children. Hence teacher community must consider collaborated effort in making academics more practical to enhance student's survival competence. This would also enable them to apply life skills in

real life situations. By doing this they can make a difference in the lives of children with intellectual impairments.

Finally education enables children including children with intellectual impairments to access other rights - for example, justice, health, living in the family and community, employment, political, social and cultural life, etc. They can live in society with dignity and become productive member in building the nation.

# Modifications for Children with Autism in Mainstream Classrooms

Indu Chaswal\*

In the past three decades there has been lot of information available in India and many other parts of the world about understanding Autism Spectrum Disorders (ASD). As a result educationists have come up with effective strategies to help parents and teachers work with persons with these conditions. The number of students receiving education in the conventional school system with a diagnosis of ASD is growing. According to the philosophy the benefits of full inclusion are increased expectations by teachers, behavioral modelling of normally developing peers, more learning, and greater self esteem. However, not all school systems or classroom teachers are equipped with a knowledge base that will provide the environment needed for the student with ASD to become successful. Special Education faculty must be trained in how to work with students with ASD in order to comply with the philosophy of Effective Inclusion.

Students diagnosed with ASD have to face a lot of challenges in a school situation. The school environment is not simple. It is a complex one. It is constantly changing and often unpredictable. Students have to cope with changing stimuli, behavioral expectations that vary from teacher to teacher, period to period. Social inclusion involves a range of interactions with adults, peer groups and students who are at different developmental levels. Rules change from class to play ground and into co curricular and extracurricular sessions. Moods and expectations from the social environment keep changing. Along with all these issues the academic challenges of each day can create stressful situations. Therefore children with Autism and other related conditions if not



managed appropriately can lead to difficulties and loss of motivation, learning and independence in the future.

The main concern of this article is to discuss inclusion of students with autism spectrum disorders with special emphasis on:

- The skills that form the basis of the inclusion.
- The challenges faced by the students at different levels of inclusion.
- The positive approaches to a successful inclusion of students with ASD.
- Ideally Inclusion of the student with ASD shall involve the following supports and consideration.
- Physical environment.
- Social environment.
- Instructional content.

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## Learning Strengths of Students with ASD

This is a general list. There is a marked uneven profile of skills across the spectrum. Therefore the strengths given below may vary from student to student. For example, on one hand clumsiness is a common challenge and on the other hand some would have significant strengths in movement and balance. The common strengths are:

- Attention to detail – students may notice and show skills in areas that others ignore. For example, in a science experiment involving measurement, assembling, mixing etc they may be very accurate. Often highly skilled in a particular area, like Math/ Drawing/ reading/ computers and geography etc.
- Encyclopedic knowledge on areas of interest.
- Tendency to be logical. Sometimes this is helpful in decision making where emotions may interfere in case of other students.
- Average to above average intelligence.
- Loyalty and honesty is probably the biggest strength. Students with ASD may never lie and can be depended upon. They follow rules very well and very seriously.

## Challenges in Learning

Children with ASD have the following challenges in learning:

- Grasping the “big” picture: Most of the children with ASD are not able to understand a concept until it is broken into simple and understandable steps.
- Uneven set of skills: Their interest may appear limited as they have an uneven skill development. In the early years when all subjects have equal importance, many students with ASD have a disadvantage.
- Difficulty perceiving emotional states of others. Students may not be able to understand what others expect from them, think about them, manipulations like friends making fun and cheating them. They are often faced by bullying of others.

- Lack of motivation. Motivation is an integral part of psychosocial development. Students with ASD may be highly motivated to do things that they like to do. Social motivation to please others or impress others is inherently limited.
- Language and communication impairments. This may result not only in making friends, play or communicating needs and feelings. This also affects in understanding the language of the instructional content.
- Difficulty processing modalities such as auditory. Therefore, they may not learn easily through the “lecture” method.
- Sensory integration problems. Most of us unconsciously learn to combine our senses (sight, sound, smell, touch, taste, balance, body in space) in order to make sense of our environment. Children with autism have trouble learning to do this. They may get very over stimulated by and distracted in a school environment and teachers may be confused about the reasons for sudden disruptive behaviors.
- Generalization of skills and concepts. They may learn things by rote or by understanding in one setting, but may not apply it in other settings.
- Organizational difficulties. They may keep making same mistakes, leave work uncompleted, loose things and be too messy in certain things.
- Difficulty in making transitions. They find it difficult to adapt to changes – teachers, classroom, student they sit with, topics, etc.

Sunny’s presence in a regular classroom, is the result of the environmental and instructional adaptations made by his school. The idea behind such modifications and adaptations is that every child should be an equally valued member of the school culture. Children with Autism benefit from learning in a regular classroom with the necessary modifications in the social-emotional and physical environment and instructional adaptations.



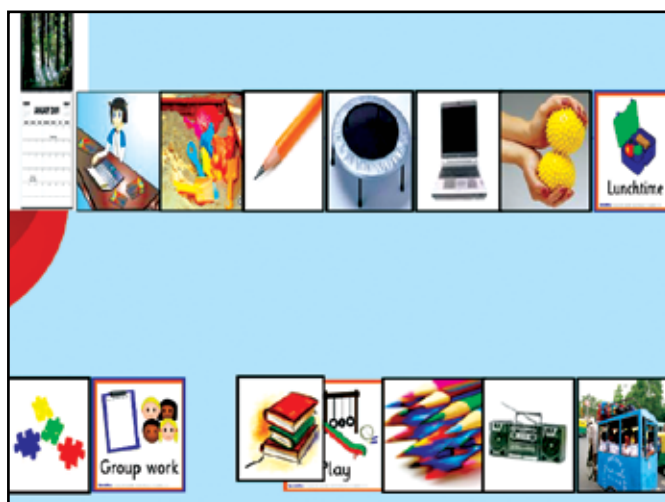
## Making Child with ASD Inclusion Ready

Sunny walks into his first standard classroom and drops his bag and bottle in the middle of the floor. He does not notice as classmates step around or over him as he plays on the hard floor. If other children move into his space, he pushes them away. One or two children greet him, but he does not answer. Sunny keeps up a running dialogue as he plays, in words rarely understandable to anyone but himself. Sunny's teacher approaches him and, using a handmade schedule book (visual time table) with symbolic pictures, shows Sunny that this is not the time for playing. The first picture on the schedule is a bench in the class, indicating that Sunny has to go to his seat. Sunny is autistic. He is charming, intelligent, creative, and full of energy, just like his classmates. However, he is unable to use language to interact with others. When Sunny uses a combination of picture symbols and words, he performs well.

Therefore, the most effective strategies for students with ASD are the ones that involve accommodations that are in tune with their learning styles.

## Accommodated Physical Environment

As discussed above lack of task management skills, sensory issues, communication impairment and strong visual learning styles, the school and the class may use a universal kind of design to suit the student with ASD as well as all the others. Many ASD children may find it difficult to move through

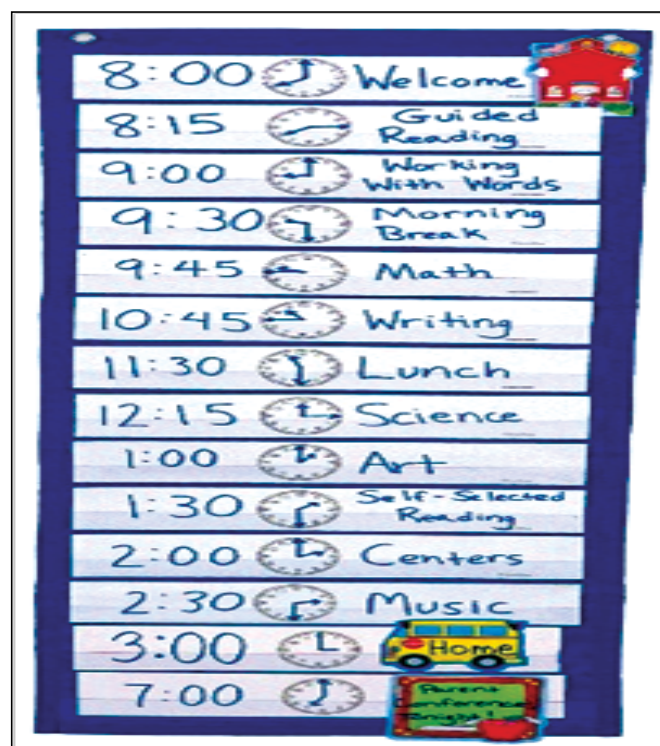


corridors especially when there is a rush time. Crowded spaces can be over stimulating. Always have the student walk with a buddy, next to a wall or be one of the first or last students to leave or enter the class at such times.

Similarly never force the student with ASD to climb or go a slide, sit on a high swing. Let the student decide. Sliding behind a friend holding on to the waist may be a good idea. Have a few things that are somewhat adapted- a swing with a back support, a low slide, a sand pit in the corner of the playground etc. Many students with ASD may be afraid of coming down a staircase. Allow them to walk on the wall or railing side, behind a friend to avoid looking at a steep staircase.

**Classroom:** The class room needs are many. These are:

- Seating arrangement near the teacher to facilitate attention and instruction. The following are useful:
  - ✓ Avoid displays on the front and side walls to avoid distraction.
  - ✓ Well supported furniture or a comfortable floor sitting arrangement (a smooth and soft mat).



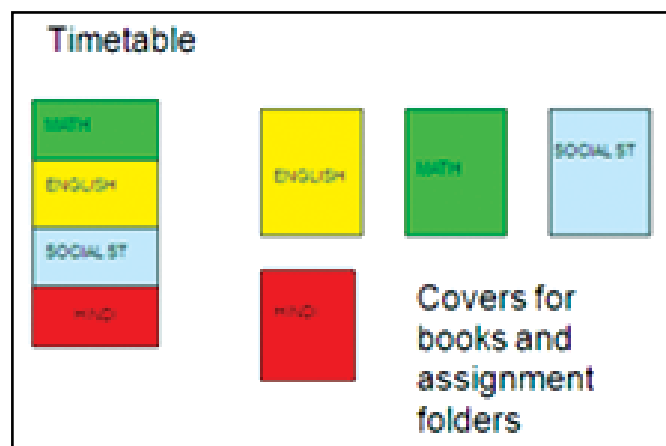
- ✓ Transport - If the school has a bus, a van or a cycle rickshaw ensure that the student has a secure body positioning, is not next to the engine or the horn and also not close to the door. Sounds, body balance issues can give rise to inappropriate and disruptive behaviors.

**Visual Supports:** Most of them are strong visual learners and benefit from the following -

- ✓ *Visual Schedules* – These are visual time tables that tell the student what will happen when and in what sequence. Pictures denoting activities are presented in a top to bottom or left to right manner.
- ✓ *Well Labeled Environments* – These include pictures, symbols or objects as cues can be used. For example clear pictures depicting girls’ and boys’ toilets, drinking water, library, quiet areas, staff rooms, medical room etc may be used.
- ✓ *Visual Boundaries* – these can be lines painted on the floors or tapes fixed on the floor to depict the limit of the area within which the student is expected to stay.

## The Instructional Supports

All individuals learn at differing rates, and with different degrees of success depending on their personal strengths and weaknesses. There is not one universal way to instruct students that will benefit all learners with ASD. Some of the most effective methodologies and accommodations are colour



coded books. Have different colours for different books and note books. The same codes may be used for the time table.

## More Practical Tips

- Try not to ask a student with ASD perform a task or answer a question publicly that might be too difficult.
- Allow a student with ASD frequent breaks.
- Use props, charts, and other visual aids - multi sensory presentations.
- Have an unobtrusive cue set up with the student who has ADHD and ASD, such as a touch on the shoulder or placing a note on the student’s desk, to remind the student to stay on task.
- Remind students that they should check their calculations.
- The teacher can give a verbal instruction and then ask the whole class to repeat.
- Write the page number for an assignment on the board and remind the child to look at the board if he or she forgets the assignment.
- Break down assignments into smaller, less complex tasks. E.g.: allow students to complete five math problems before presenting them with the remaining five problems.
- Highlight key points using different colours on the board.
- Have students work together in small groups to maximize their own and each other’s learning. Use strategies such as Think-Pair-Share where teachers ask students to think about a topic, pair with a partner to discuss it, and share ideas with the group. Example - draw/ objective types/ short.
- Provide the student with a copy of the teachers notes or peers notes so that the student can focus on listening.
- Provide advance warnings, Announce 5 or 10 minutes before the end of the lesson (particularly for seatwork and group projects) how much time remains. You may also want to tell students at

the beginning of the lesson how much time they will have to complete it.

- Worksheets should be dark in black print and instructions should be highlighted.
- Write clear, simple directions.
- Underline key direction words or vocabulary or have the students underline these words as you read directions with them.

*Graphic Organizers* - Prepare Graphic organizers as these are some of the most effective visual learning strategies for students with autism and are applied across the curriculum to enhance learning and understanding of subject matter content. In addition to helping students organize their thinking and writing process, graphic organizers can also help in memorizing, as these are visuals.



## Test taking Strategies

It has been observed that students with autism do not perform well on tests and assignments, even though they know the subject. Some useful tips have been given below:

- Give frequent short quizzes and avoid long tests. They find it difficult to remember, sustain attention and organize long answers.
- Shorten assignments. If the student can demonstrate adequate concept mastery in 10 or 20 questions, do not require 30-40 problems.
- Allow extra time for tests.
- Use the students' strengths like drawing to illustrate their answers.
- Encourage them to ask for help if they are stuck.
- Teach the use of choices if any in an exam.
- Teach to answer the question when that is worded differently. For example – If the student

has learnt to answer the question, “explain the water cycle”, he/ she should be able answer, “write down the stages in formation of rain”.

## Social Supports

Selection of a sensitive group of students especially for transition times is needed like in the bus, playground, etc. The group would need sensitization since students with ASD have limited social and communication skills, the other students who volunteer to be their supports through buddy systems may need lots of motivation, rewards as better grades. Also, it is a good idea to keep changing the buddies and avoid stagnation or saturation. Identify supportive families, senior students willing to devote time to help in things like lending books to copy assignments and monitoring the attitude of other students during transitions like lunch break and games.

Behavioral issues of students with ASD are challenging for the teachers and fellow students. These behaviors are mainly due to:

- Instructions that are either not clear and are unpredictable.
- Sensory issues.
- Demands beyond the students level of performance.
- Lack of motivation.

Their behaviors can be interpreted as -

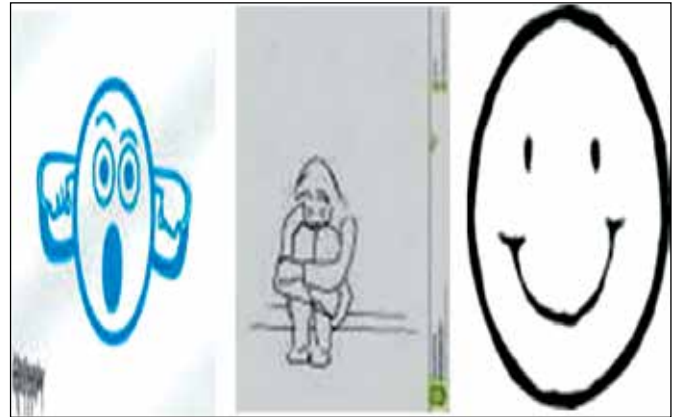
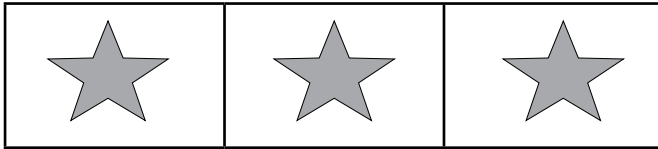
- *Flight Response* - escape from demand or sensory overload.
- *Fright Response* - often withdrawal due to anxiety.
- *Fight Response* - the student actively resists the above.

Some well established positive behavior supports include:

- Use of reinforcement- the teachers will benefit from providing tangible reinforcement like food, toys, etc.
- Gradually use social reinforcers and Activities like swings, walking out in the ground, etc.

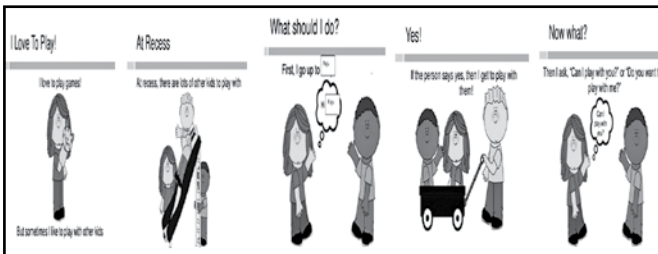


- Token economy in the form of allotting stars and smilies also can be useful.
- The student must know what these token will be traded into. Example three stars and you will go to the swing. After every period the star is allotted.



### Social Stories

A Social Story describes a situation, skill, or concept in with relevant social cues, expectations from others, and common responses by the student. It is a way of teaching a student an appropriate behavior or response with a Social Understanding in a specific situation. It makes the events and expectations very clear for the student. It does not address all the difficulties in a situation but targets on one of difficulties in the situation.



### Sometimes my Ears Hurt

My ears pain when I hear the school bell  
When there is a speaker



When many children talk together

When the music is loud

I will try to cover my ears

I can also sit in a quiet place

I will feel happy

Because of the tremendous diversity among students with ASD, there is no single strategy that can work with all and at all times. The attitudes of the teacher can determine the success of the student with ASD in the general education classroom. Teachers, who provide appropriate environments, use proven and positive behavior-management strategies, and accept students with realistic expectations will see that students with ASD make progress in socialization, communication, and academic achievement. When educators enthusiastically become creative in teaching and deal with the students consistently, the rewards will be obvious.

# Teaching Students with Multi-sensory Impairments

Akhil Paul\*

Teaching is probably one of the very few professions which bring teachers in contact with the varied and diverse range of children except those children who have different learning characteristics due to their cognitive, sensory, physical or psychological challenges. And with the increased focus on 'inclusive education', all these children with 'specific learning needs' are now being enrolled in their neighbourhood schools so the teachers in these schools are being exposed to much wider range of children. Every year with increase in the means and ways of combating diseases, the resulting disabilities have also been increasing. The disabilities have now become more complex due to the sophisticated level of medical services, increase in the survival rate and high life expectancy. Many children with critical complications are surviving and are now living with some disabling conditions or Multi Sensory Impairment (MSI). The medical efforts are always noted to be positive as far as lives of children are concerned, but unfortunately such children, in most cases, suffer physical or sensory losses. Increased awareness in the community due to government and non-government interventions, acts and legislations, policies, programmes and benefits have led to increase in reporting of incidents of severe and multiple disabilities.

## Which children are we talking about?

**Tanvi**, a 8 year-old girl, is diagnosed to have congenital cataract. It is suspected that she responds to light. She is also diagnosed to have moderate hearing loss in her right ear. She has spasticity in her lower limbs and can only sit with support and does not reach out with her hands to hold objects. She identifies her mother through touch and smell. She cries when she needs something.

She is diagnosed to be a child with "multisensory

impairment" as she has developmental delay and cerebral palsy with both vision and hearing loss.

**Rajesh** is a 12 year-old boy. He was born with both visual impairment and hearing impairment. Today he can see at a distance of three metres. He uses thick glasses. He reads words and pictures when it is shown to him in large-size print. Rajesh is assessed to have profound hearing loss. He uses basic gestures and simple signs to communicate with people around him.

He is diagnosed to be with 'multisensory impairment' – having moderate mental retardation, partial vision and total hearing loss.

**Nikhil**, 14 year-old boy, can turn to his side while lying on the bed. He sits with some support. He needs to be carried from the bed to chair to sit and watch television. He makes different kinds of sounds during the day, some of which is interpreted by his family members. Clinical tests show that he has normal hearing and vision. On observing him it is difficult to assess, if Nikhil identifies what he sees or hears. He gets at least 3 to 4 epileptic attacks everyday and has been hospitalised for respiratory disorders numerous times.

Nikhil is diagnosed to be with 'multisensory impairment'. He has severe mental retardation, cerebral palsy, epilepsy and other serious medical needs.

**Laxmi** is a 9 year-old girl. At the age of two, she was diagnosed to be visually impaired. At five years of age, the parents realized that Laxmi could not hear too. Till almost 5 years of age she was surviving only on fluids and not a stitch of cloth on her body. She continues to stay awake during the night and sleep in small spells during the day. She bangs her head, scratches others when they touch her. She prefers to sit by herself in a corner and rock her body and hit her ears continuously.

\* Director, Sense International India, Ahmedabad



She is clinically diagnosed to be with multisensory impairment (deafblind) - totally blind and has profound hearing loss in both ears.

All these children are benefitting with teaching strategies which are tailor-made as per their individual felt needs in either home-based setting or school settings. In these settings the students are being supported through a structured programme. They are also developing skills to understand the objects and people around. Some also receive intensive speech therapy and are able to attend the neighbourhood school while receiving the similar additional support. Some receive support from a trained educator/ caregiver at home. And parents and other family members receive regular assistance in developing their skills to use the sign language so that a signing/ total communication environment is available both at home and school.



These are a few examples, a few real stories, of children who are going to be discussed in this article. And from these examples we can see that there is no one particular category or nature or combination of disabilities that we can call as **multi-sensory impairments or multiple disabilities, it refers to: a combination of two or more disabling conditions that has a combined effect on the child's communication, mobility and performance of day-to-day tasks.**

Just as every child is different, similarly every child with multiple disabilities is different. However there are some traits that this group of children have in common:

- It affects the all round development of the child.
- Communication with the world around is most severely affected.
- Opportunities to interact with the environment become very limited.
- Ability to move around in the environment is restricted.
- Need regular help in simple day-to-day activities such as wearing a shirt, opening a door, finding a chair to sit down and so on.
- A highly structured educational programme helps in their training.

### Learning Needs of Children with Multisensory Impairment

Children with MSI fail to search and explore the environment on their own. They are confused about the environment around them and often withdraw from the environment. Simple day-to-day skills such as eating, dressing, washing, etc will be difficult to learn as they often cannot learn by just imitating or looking at others. They will not learn things naturally but need to be taught simple things repeatedly over a period of time in the same way at the same setting. Isolation is a big obstacle in learning as children are either not aware of what is going on in the environment around them or they do not understand their role in it.

#### Learning Characteristics:

**Individual Instructions:** Due to the many different problems faced by the children and the need to bring the world closer to the children with multiple disability, individual instructions help to a great extent. Close physical proximity also makes the children feel safe and secure to explore the world by themselves.

**Reliance upon Interpreters:** Communication need is a primary need. And not all persons around the child will know how to use gesture or signs, or specific sounds and objects to talk with the child. The children therefore need people around them all the time that can be the link between them and the world. This limits their experience and learning.

**Limited Social Experiences:** Fear from both sides – adults as well the child, due to limited





communication methods, makes it difficult to know each other better and develop a relationship.

**Multiple Hospitalisations:** Children may need to get medical care very frequently at the hospitals. Because of this, there are frequent breaks in their schooling or other training routines.

**Bonding:** Effect of multiple disabilities at birth or at a very young age leaves the mother confused and fearful. The child also does not reach out to the mother, as a newborn child would do. Detachment between mother and child begins in the early months itself.

**Establishing Ideas and Concepts:** Children with multiple disabilities, especially deafblindness have a great challenge in remembering and objects and actions when the same are not in front of them to touch all the time. For such a child, an object does not exist if s/he is not touching it.

**Restricted Mobility:** Limited ability to move around due to poor motor development, cerebral palsy and other locomotor difficulties reduces the chances of the child to move around and explore things by self and learn about them.

**Reduced Motivation:** Children with multiple disabilities, in general show low interest to move around and explore things for themselves. This is due to either their motor problems, or lack of a 'seeing' or 'hearing' image of the world around. More often children are not able to follow the quick and efficient movements of the adult world unless care is taken to show them the world at their pace.

## Teaching Children with Multisensory Impairment

The teachers and family members have a constant challenge on their hands to provide clear and precise information to the multi-disabled child. At times, the adult needs to act as if they are the eyes, ears and hands of the child to understand what is going to be meaningful and relevant to teach the child. Fellow students, teachers, family members, therapists, medical doctors etc. all form a part of this teaching and learning world for the multi-handicapped child.

It is important to provide a multi-disabled child with a reactive environment rather than a directive environment. The child and his educator need to

do things together, rather than the child being told what and how to do things all the time. It is helpful for the child to feel successful at every attempt that s/he takes. The role of the educator in understanding what interests the child, how long can he keep the child's attention and sometimes, physical energy at a particular task is also important.

Giving choices for communication, problem solving, exploration and independent mobility are the key areas. It is important to think about ways to help the child, to know what will be helpful for the child to learn in his life. Each attempt to teach the child new skills in life, needs to focus on the child's residual senses and other remaining strengths. It is always helpful to introduce each teaching activity in such a manner that the child makes use of all his strengths.

Reward and reinforcement are very basic to the learning environment of the child. Attention and praises will not spoil any multi-disabled child any more than it would spoil other children in the class so be consistent in your rewards and praises.



There is no doubt that individual planning for each child with multiple disabilities ensures the monitoring of their progress at school and the "Individualised Education Plan" (IEP) also helps a teacher in systematic planning of learning objectives and curricular transactions in both daily as well as long term basis. Often it is seen that regular curriculum is not comprehensive enough to address areas relevant to the needs of a child with multiple disabilities so a well written IEP provides a structure which assists teachers and therapists in focussing on important areas of learning and it



also gives clear information on how certain aspects of curriculum needs to be taught by outlining additional resources and support the child may need.

It is essential to ensure that progress is being made as per the IEP but having an IEP in isolation will not help unless it is part of the regular classroom curriculum. For this linkage between the IEP and the curriculum based classroom objectives, the educators need to define and modify the curriculum based teaching approaches and or strategies, keeping in mind all students.

For better learning and participation of children with multiple disabilities, the teacher can make modifications in following ways:

- Increase the readability of presented material.
- Highlight critical features as per the lesson.
- Reduce extra details and simplify the layout.
- Supplement with visual cues (pictures, tactile diagrams, maps, textures).
- Supplement with written prompts or object cues.
- Simplify the language- use shorter sentences, simpler vocabulary.
- Use experience based or interest based material.
- Include alternative materials (objects, models, videos, etc).
- Create new materials as per the need of the child.
- Provide additional instructional support through resource teachers, peer tutors.
- Utilise additional technological resources.
- Collaborate with (ask) other teachers.

There is no school in the world in which the regular curriculum is appropriate for all students. While most education systems claim that their curriculum is appropriate for all, this is never the case unless some form of curriculum adaptations takes place. In order to adapt curriculum, teachers need to keep certain basic identification issues in mind to find out if the student can take part in the curriculum in the same way as others. If not then does he need some adaptations in terms of environment; instructional/ teaching strategies; different learning objectives and also how to maximise participation of the child.



Multi-sensory Impairment creates more difficulties in the life of children by limiting their movement and ability to learn, explore and express themselves in their immediate environment. These limitations affect the child's educational needs and they are mostly deprived of getting education in the mainstream education.

With the implementation of Right to Education Act and Sarva Shiksha Abhiyan, inclusion of students who are deafblind in a typical classroom presents a wide variety of abilities, needs and poses major questions regarding the development of appropriate curricula and instructional strategies. The teachers and parents have raised concerns about successful adaptation of both content and teaching methodologies in general education for students with Multi-sensory Impairment who do not gather and access ongoing information in a traditional manner i.e. by seeing or listening. However, when we are planning for inclusive education, the student with deafblindness/ MSI must be provided with an opportunity to be an active participant in the class in ways that are individualized to reflect his or her particular learning needs and IEP goals.

In any education system, the curriculum is one of the major obstacles or tools to facilitate the development of more inclusive system. Curriculum is often unable to meet the needs of a wide range of different learners especially children with deafblindness. In many contexts, the curriculum is centrally designed and rigid, leaving little flexibility for local adaptations or for teachers to experiment and try out new approaches. The content might be distant to the reality in which the students live, and therefore inaccessible and demotivating.

In our country of diversity, curriculum is designed universally, hence which leaves little flexibility for local adaptations or for teachers to experiment and try out new approaches. For inclusive access to curriculum it should be ensured that the same curriculum be followed for children with and without special needs, but with minor adaptations like small changes in learning content, learning inducing environment, appropriate learning approach, adaptation in learning aids, flexibility in evaluation, etc. It would be important to provide text books and curriculum in accessible formats for children with deafblindness.



Adapting a curriculum which is inclusive of all learners may involve broadening of current definitions of learning. Inclusion in a typical classroom of students who are deafblind and who themselves represent a wide variety of abilities and needs presents major questions regarding the development of appropriate curricula and instructional strategies. Concerns arise about successful adaptation of both content and teaching methodologies in general education for people with deafblindness who do not gather and access ongoing information in a traditional manner.

Curriculum adaptation for children with deafblindness/ MSI will involve making necessary changes in learning content such as modification, substitution/ replacement, omission as a last resort, compensation etc., without changing the learning purpose. Keeping the children with deafblindness/

MSI in mind while adapting the curriculum, small changes in learning content, learning friendly environment, appropriate learning approach, adaptation in learning aid and evaluation should be adapted.

The teacher will use sign and the student would keep his hand over the teacher's hand. The teacher should sign in a normal or the pace which is comfortable for the student and make sure that the student keeps his hands over the teachers' hands. When the student doesn't know the sign for a specific word, then gestures and objects could be used.

\*Repetition of the activity has to be done depending upon the child cognitive ability. The teacher needs to have fair understanding of using Abacus/Taylor Frame to teach the child and child should have been introduced to the Abacus/Taylor Frame. Instruction of teacher should be simple and clear.

**Expected Action:** Student would be able to add two digit numbers using carry forward concept. S/he will show understanding of the concept of "Addition" using carry forward in real life objects.

## Methodology

### A. For Low Vision:

Give a large print of the question and use objects in making the child understand the concept of "carry forward". Teacher has to explain the carry forward concept – Whenever the sum of two numbers in two digit numbers additions goes to '10' or more than '10', the number '1' will be added to the tens place in upper two digit number.

The repetition of the same activity has to be done for a good amount of time to make the child understand it properly.

In the above method, use different objects in place of same objects.

### B. For Low Vision and Deafblind Child:

Using Abacus

Using Taylor Frame

Using TLM Number Card Box

### Illustration

Subject	: Mathematics
Class	: II Std., Unit 12
Topic	: Give and Take
Sub Topic	: Carry forward in addition
Category of the student :	Totally Deafblind, Totally blind with partial hearing loss, Low Vision with profound hearing loss, Low vision with partial hearing loss.
Materials Needed	: ABACUS, Taylor Frame, pencils, candies and TLM box, etc.
Mode of Communication :	Tactile sign language Braille and large print

**Evaluation:** Give same but different number of objects in the child's hand and ask him to add, carry forward and count (using the same TLM). Later on, two different objects of different in number are given and then child is asked to add, carry forward and count total objects.



### Conclusion

With slight modifications in the teaching method, a teacher can fully include a child with MSI. The teacher needs to be aware of inclusive teaching practices that benefit all children. Adaptations can be undertaken by any teacher, if s/he knows the learning needs of the child. With proper modifications, a well sensitized teacher and with adequate peer support all children with MSI can learn in mainstream classrooms.

# A Tool for Enabling Inclusive Teaching Learning Resources at Primary Level from Inclusive Education Perspective

Prof. Anupam Ahuja\*  
&  
Deanne Middleton\*

In the past few years both globally and in India there has been an emphasis on how educational resources, activities and practices can be made available to all learners in regular schools. In our country this need is also supported by the Constitutional provisions and legal mandates such as the Persons with Disability Act, 1995 (PWD) and the RTE Act, 2009. Post the NCF 2005 there has been an enhanced awareness with position papers completely dedicated to the discussion on promoting inclusive education for the learners belonging to groups on the margins.

Addressing the needs of these learners means responding to their diversity through increasing their participation in learning, culture and community life, thereby reducing exclusion within and from education. This involves changes and modifications in content, approaches, structures and strategies, with a common vision which covers all children of the appropriate age range and a conviction that it is the responsibility of the regular system to educate all children.

Teaching learning resources play a significant role in moving towards inclusive educational practice. Among the teaching learning resources textbooks constitute a primary source of knowledge for majority of children and can facilitate the creation of enabling learning environments for all learners. Textbooks need to address disabilities, gender bias and discrimination against the socially disadvantage

groups and economically weaker sections which are often constructed by social attitudes, policies and practices. The textbooks thus need to cater to diverse groups of children and challenge barriers which often exist in the mind.

## Diversity in Textbooks

The findings of salient international research studies focusing on the role of textbooks indicate a limited perspective while covering diversity in particular with reference to disability, gender and socially disadvantage groups and economically weaker sections. In Spain the results of a study conducted on 'how images of disability are portrayed in physical education textbooks' indicates a noticeable imbalance between children with disabilities and those without disabilities. Further, girls with disabilities were less frequently represented than boys with disabilities.

A limited representation of disabled people in visuals and texts in elementary school textbooks was revealed in a study done in Turkey. It pointed to the need to ensure that students develop positive attitudes towards the disabled along with an increased awareness of the educators and textbooks writers on the representation of disabled in the visuals and text.

Similarly in Taiwan research done on 'The representations of disabled in elementary school textbooks' concluded that disabled children are under-represented in the textbook, and those

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represented were mostly children with physical disabilities. Children with mental illnesses were by and large ignored. Children represented in textbooks were mostly voiceless and there were very few discussions addressing the diversity and multiculturalism.

An American study on characters portrayed in textbooks analysed the textbooks from the minority perspective ( blacks, American Indians etc).The study concluded that the textbooks are intended to teach not only facts but also to influence values and behaviours. In addition textbooks have an impact on children's attitude, behaviour and academic achievement.

## IE Concerns in Textbooks

The teaching learning materials play an important role in promoting inclusion in regular schools and there is a need to analyse textbooks from an inclusive education perspective. A tool has been developed to analyses the teaching learning materials focusing on gender, disability and socially disadvantaged.

## Gender Concerns

In the picture, the children are happily conversing with each other and raising no questions. The important questions to ponder over are why do we have this situation and who all can be responsible for the content of this conversation?



The worldview of adults is reproduced in the children through their socialisation processes, which is extended in the classrooms. Teaching learning resources should not lead to conventionally accepted stereotypical gender associated roles. There is a need to put-forth an assembly of gender neutral experiences of all girls, boys and third gender. An in-depth enquiry into content and the gendered construction of knowledge is required.

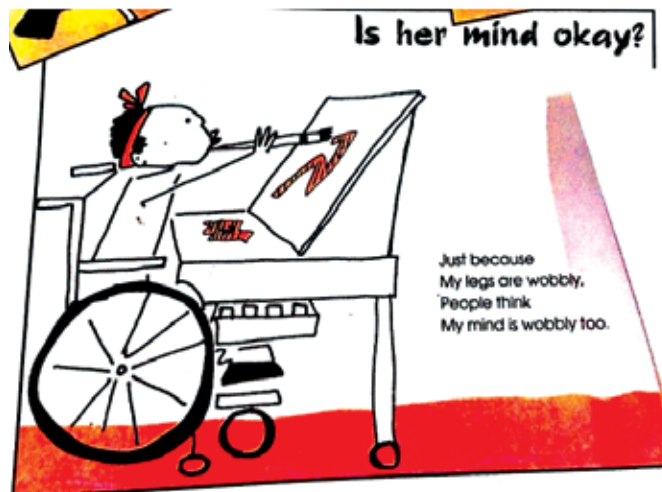
### **Socially Disadvantage and Economically Weaker Section Concerns**

*Nine-year-old Shankar always sits at the back in the class with other children from a similar “low caste” group. His peers from the “upper caste” call him “names”. When he complains to the teachers, they see no issue. At lunch, Shankar says the children from the other castes are served food first, while he and his fellow caste children are asked to wait outside the classroom; should any food remain after the teachers and “upper caste” children have eaten, it may then be offered to Shankar and other children from the “lower castes.”*

Shankar’s experiences highlight concerns such as seating and other arrangements in the classroom. There is a need to reflect on why teachers refrain from addressing Shankar’s complain. Textbooks need to challenge in equalities and discrimination towards socially disadvantaged groups and economically weaker sections. All children including children belonging to these groups should have non-discriminatory access to classroom transactions and to other education spaces such as playgrounds and mid-day meal in schools. The textbooks and teaching learning processes should ensure that all children including those from diverse backgrounds are included both academically and socially.

### **Disability Concerns**

There is a question raised about Anamika along with an accompanying text in the illustration above. What is the message being communicated? What are your views on the pertinent concerns raised by Anamika? It is critical to view children with disability as children first, before defining them by



their disability. Equally important is to find ways in which textbooks do and can address these issues. There is a need to collectively deliberate on how children with disability can use textbooks along with other children in regular school classrooms.

### **The Tool for IE Analysis**

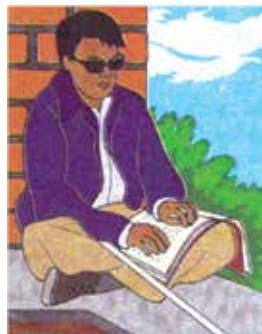
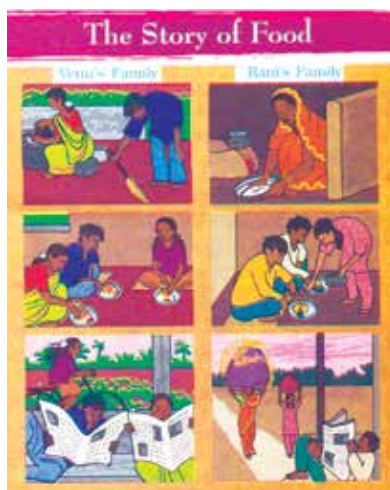
Learning ought to promote interaction on an equal basis for all learners including Anamika, Shankar and others in inclusive settings. Textbooks being an integral part of such learning need to be analysed from an inclusive perspective. The tool consisting of indicators enables the process of analysing the teaching learning materials from three major IE concerns viz. gender, disability and socially disadvantaged and economically weaker sections.

This Tool lends itself to the analysis on the following aspects of the textbooks:

- Title of the textbook.
- Cover page outer and inner (front and back) of the textbook.
- Unit and chapter headings.
- Content of the chapters.
- Chapter Layout- text and visuals.
- Questions /Exercise /Activities.
- Teacher’s page /note.
- Textbook development committee members representation.

Each aspect in the tool with indicators has to be graded on a five point scale. Glimpses highlighting the use of the Tool are cited with some examples. A picture in the EVS class III NCERT textbook on page 87 shows a visually challenged child stereotypically wearing dark glasses to hide his close eyelids. Such visuals or a short story for example in the NCERT English textbook class IV pg.81chapter 'Hellen Keller' do not suffice the purpose. Care needs to be taken to sensitively portray differences and challenges among children. In addition concentrating only on the success stories of high achieving individuals with disability and others also is not appropriate.

The Tool also helps to highlight the issues that address negative attitude and stereotypes. For example, NCERT EVS Class III, Chapter-14, Page-92 shows a picture of two contrasting scenarios through Venu's family and Rani's families. In another example in NCERT EVS Class III chapter-5 Chhotus House discusses unconventional houses and encourages children to reflect upon their own houses and the traditions followed.



The analysis of the textbook using the Tool indicates that the challenge is how all learners relate to the content in the textbook. It also stands out that it is critical for textbooks to rigorously promote values that encourage respect, sharing and valuing diversity. The textbook bureaus need to be sensitised on how to cater to the varied needs of all children for which the analysis from IE needs to be undertaken. This analysis can lead to formulation of guidelines which can be used by Textbook Bureau for making textbooks inclusive.

### Conclusion

There is a strong need to accept and acknowledge the fact that children should not be bound into straight jacketed conceptions that are restricted to their identity. Textbooks often fail to take into account the lived realities of many children and issues such as non-discrimination and stereotyping. Textbooks need to sensitively address and challenge the highlighted concerns and cater to needs of all learners. Therefore there is a need to analyse textbooks from inclusive perspective focusing on gender, disability and socially disadvantaged and economically weaker sections. It is also important to consider how well (or not) teacher educators and teachers can be flexible in preparing and adapting teaching learning resources for providing equal learning opportunities to all.

# Inclusion of Disability in the Textbooks—Initiatives by the States

Inclusive education means that all students attend and are welcomed by their neighbourhood schools in age-appropriate, regular classes and are supported to learn, contribute and participate in all aspects of the life of the school. Inclusive education is about how schools, classrooms, programs and activities are developed and designed so that all students learn and participate together. Another very important aspect of inclusion is curricular access. Every child in school should be provided with equitable access to curriculum, textbooks and teaching learning material in the form best suited to his/her learning needs. This article captures initiatives by some of the States in incorporating chapters related to inclusion and disability in the textbooks.

## Rajasthan:

Sarva Shiksha Abhiyan (SSA), Rajasthan has been rendering services to the CWSN under the inclusive education programme. The aim is to facilitate the inclusion of CWSN in mainstream schools. Inclusive



education has proven to be a key benefit for children with special needs as a means to an end of greater social acceptance. However there still persists a greater need for awareness-raising measures at mainstream schools to make the peers

and teachers as well as community cognizant with the concerns of CWSN. In this regard textbooks can play an important role in preparing the non-disabled students' and developing in them empathy and sensitivity toward their disabled peers. It can also lead to appreciation for those who are different. When textbooks address disability related issues, it enables teachers, peers and community to make special efforts for children with special needs. It also develops positive attitude among them regarding children with special needs. The talent and the potential of CWSN are also showcased through incorporation of positive role models in the textbooks.

In this regard, the Department of Education, Government of Rajasthan has shown keen interest for the inclusion of disability in the textbook. State Institute for the Education Research and Training (SIERT), Udaipur worked for the inclusion of disability component during the textbook writing. Few of the examples are given below:



In the class III Hindi Book “Runjhun-3” there is lesson namely “Palak Ki Daur.” This chapter deals with the concerns of a girl with disability. The character name Palak is orthopedically impaired. The lesson clearly shows the inclusion and participation of Palak in co-curricular activities. The school staff has a positive attitude towards her.

In the class VI Hindi Book “Vasant – Bhag-1” there is lesson namely “Ek Daur Aisa Bhi.” This is about a child with Down syndrome. In the story, there





was a race of children in the school and this child participates in the race. He falls down during the race. The other children stop running. They help him get up and all go altogether to the final line of race. The jury gives gold medal to all children because all of them come at the same time.

In the cover page of many textbooks, an awareness generation short story namely “AapkeViklang Sahpathi” is enclosed in which Rahul is a visually impaired child, Ananya is hearing impaired girl and Sohan is wheel chair user.

### Madhya Pradesh:

The social stigma against physical impairment and mental illnesses is the first hurdle in reaching out to Children with Special Needs (CWSN). Families,

especially parents of CWSN live in denial. Physical or mental disability is seen as a predestined fate and a child with disability is expected to live as a dependent and considered a burden on the family. The need then, is not just to reach out to the People with Disabilities (PWDs) but also to spread awareness about disability. The most difficult fight is the one against stereotyping, bias and unfounded beliefs. Influence and develop systems and processes to ensure that there is no exclusion, exploitation or stigmatization of the persons with disability at the levels of policy and its implementation within their community.

A CWSN is either over protected or utterly neglected. Both situations lead to his/her marginalization. Inclusion cannot take place without acceptance of the disability of the child. This acceptance can only come from knowing and understanding the child, his/her disability and disabling conditions around him/her.

With a view to influence and develop systems and processes to ensure that there is no exclusion, exploitation or stigmatization of persons with disability at the levels of policy and its implementation within their community and to generate awareness on different disability issues amongst different stakeholders i.e. teachers, school administration, children, their parents, disabled children and their care givers.

In the year 1999 Department of School Education, Government of Madhya Pradesh in collaboration with Arushi, a NGO working for the rights of PWDs decided to include a one - page information on different aspects and types of disabilities in all school textbooks. The officials greatly appreciated the idea, as this was the easiest way of reaching out to the unreached in the remotest and most inaccessible areas. The M.P. Text Book Corporation, further took idea forward and decided to include 5 different pages on disability issues in more than 35 million textbooks that had to be printed. Within a short span of 15 days, half of the elementary school textbooks had one - page information on different disability issues.

This initiative evoked very good response from all quarters. Ministry of Human Resource



Development, Government of India, asked all the states to emulate this initiative. Now, this one page information is included in all 100 million textbooks published by MP, 30 million textbooks of Chhattisgarh and 90 lakh textbooks of Rajasthan. Children with disabilities require early intervention, which they are largely deprived of, because their caregivers have little or no knowledge about the specific intervention required. Now 16 different topics covering various aspects of disabilities are included. These textbooks are a very good resource for teachers and care givers. They can find basic information on disability issues.

### The topics include:

- What can you do if you have a student with hearing impairment in your class?
- How can you help your child who is orthopedically impaired?
- What can you do for a visually impaired child in your class?

Such simple guidelines that educate and empower teachers, students, parents and other stake-holders are included in all state school textbooks from class I to class VIII. This unique campaign by Arushi in collaboration with the Madhya Pradesh Textbook Corporation facilitates inclusion. If these messages find place in the text books published by NCERT, CBSE and various state governments they would greatly help in dispelling prevailing myths and misconceptions associated with disability and would help in creating an inclusive climate.

### Goa:

Goa has adopted the NCERT syllabus and is also using the text books developed by NCERT. Only thing is that Goa uses the translated versions (Marathi /Konkani) in respective medium schools.

Lesson-7 of Environmental Sciences in Class-III focuses on the issue of inclusion. The immediate environment of a child is diverse. A child comes across different type of people. Initially it may be difficult for the child to realize that there are different types of people. Different people have different abilities. For a non disabled child it is

Step V - HINDI - (100)

सलाईसर्वो पाठ  
**सीखो**



अच्छी-अच्छी बातें सीखो।  
मिल-जुलकर रहना सीखो॥

लूले, लँगड़े, अन्धे जो हों।  
उनकी सेवा करना सीखो॥

झगड़े से क्या मिल जाएगा?  
प्रेम से हरदम रहना सीखो॥

पीछे पैर न पड़ने पाएँ।  
आगे पैर बढ़ाना सीखो॥

मुँह से कड़वी बात न निकले।  
मीठी बातें कहना सीखो॥

अगर चाहते आदर पाना।  
सबका आदर करना सीखो॥

sometimes difficult to accept this fact as it is beyond the imagination of the child. But the special child has to know and face these challenges. Peers have to be sensitive to the needs of the special children and should also be willing to accept such a child as his/her friend with whom he/ she can communicate, share, play, study the way he /she could do with any other child. The Chapter introduces this idea in a subtle way.

The teacher writes a word on a piece of paper. The children are required to express the word without talking and only by way of acting. So the children are required to act out. They thus try to act it out and realize that they can communicate without the ability to speak and that actions and body language can substitute for language in communicating the thought or an idea. They use multiple ways to express the word they had read. They use signs, gestures,

facial expressions, etc. They might encounter some difficulty but it is overcome by them. In the process they get sensitized about the needs, thoughts, emotions and difficulties faced by the children. This brings about a kind of awareness and develops an understanding. Children know that like any other child, the special children too can communicate and comprehend but in a different way. Children also learn lip reading along with the sign language.

The other important thing that children learn is “not all children can do all the things.” They understand this when they were required to act out and understand the word. This develops in them empathy towards the impaired child.

The lesson is followed by a short poem which is a translation of the poem ‘I have a sister’ by Jeanne Whitehouse Peterson. In this poem the poet describes his sister who is deaf. He speaks about the things she is able to do and she likes to do. He explains how she learns her lessons and how she is helped by his mother. In the last stanza of the poem she asks her brother (poet) to remove the dark thick black spectacles which he has on his eyes. Perhaps she wants to read his eyes. She wants to know what his eyes communicate to her. It impresses on the reader the list of things which she can do despite being deaf. The pictures given at the end of the lesson support the theme as they are mainly the impressions on face which are to be read.

### Jammu and Kashmir:

The Jammu & Kashmir Board of School Education has introduced some of the chapters in the English text books prescribed at elementary level. The series is entitled as Tulip Series. The book prescribed for 3rd grade has a lesson about senses wherein a blind child tells his story of how and why he got blind.

In 5th grade there is a lesson about Louis Braille, his complete life history including Braille system of writing. Here teacher has been directed to make all children understand how to read and write in Braille. Lot of practice exercises have been developed to provide clear understanding of the script.

In 6th grade there is a chapter entitled Differently Aabled, wherein a school having inclusive setup has



been described. In this school every child has to play a role of an impaired child so as to develop empathy among children. A student has to act as lame and feel the difficulties he/she faces in such a situation. Then another student has to be blind (by being blind folded) for the day and yet another has to be hearing impaired. All the children have to strive for themselves. Other children come to their help only when the differently abled face difficulties.

In this chapter also lots of exercises have been given to make children understand the life of special children who are to be treated as equal, respectable and important people in the society.

These are some of the chapters that have been introduced in text books by the State at the elementary level. However revision and updation of the text books by State Board is under process. Any other change regarding inclusion would be communicated in due course of time.

This is just a beginning of an initiative by SSA. Educating students in an inclusive setting will succeed when it is pedagogically equitable and when the focus is on the inclusion of all learners to be taught using diverse ways of learning: education delivered through a format of questioning, research, cooperative learning, individualised expectations, and critical thinking – all generally captured under the term “best practices.” Every child in school should be provided with equitable access to curriculum, textbooks and teaching learning material in the form best suited to his/her learning needs.



# STATUS OF INCLUSIVE EDUCATION IN SSA



policy. This means that no child having special needs should be deprived of the right to education and taught in an environment, which is best, suited to his/her learning needs. These include school readiness programmes for CWSN, home-based education for the severely disabled CWSN. The ultimate aim, however, is to mainstream all CWSN in neighbourhood schools.

The major thrust of SSA is on inclusion or mainstreaming

**R**TE Act, 2009 mandates free and compulsory education to all children from 6-14 years of age. The key objective of RTE- SSA is Universalization of Elementary Education (UEE). Three important aspects of UEE are access, enrolment and retention of all children in 6-14 years of age. This goal of UEE, has further been facilitated by the Constitutional (86th Amendment) Act, making free and compulsory elementary education a Fundamental Right, for all the children in the age group of 6-14 years. This Amendment has given a new thrust to the education of Children with Special Needs (CWSN), as without their inclusion, the objective of UEE cannot be achieved. In-fact inclusion of one of the groups, which is extremely crucial for UEE, is perhaps that of the CWSN. Hence, education of CWSN is an important component of SSA.

## RTE - SSA's Policy on Inclusion

SSA ensures that every child with special needs, irrespective of the kind, category and degree of disability, is provided meaningful and quality education. Hence, SSA has adopted a zero exclusion

CWSN into the fabric of formal elementary schooling. Experiences of programmes like DPEP and various research findings have shown that inclusion is best determined by the individual needs of the child. Most children with special needs can be enrolled and retained in regular schools if adequate resource support is provided to them, whereas there are others who might have to be provided some kind of pre-integration programmes, before they can be mainstreamed in a classroom. There might also be still some CWSN with severe profound disabilities, who would require an educational programme and intensive specialized support.

Every child with special needs should be placed in the neighbourhood schools, with needed support services. Children with special needs need to be facilitated to acquire certain skills that will enable them to access elementary education as envisaged in the Right to Education Act. For instance, they may need mobility training, training in Braille, sign language, postural training, etc. Thus, school preparedness of children with special needs must be ensured by providing 'special training' as envisaged in the RTE Act. This training may be residential,



non residential or even home based, as per their specific requirements. The existing non formal and alternate schooling (including home based education) options for children with disabilities can be recast as 'special training'. This means that (a) all children with special needs who are not enrolled in schools or have dropped out, will first be enrolled in a neighbourhood school in an age appropriate grade, (b) they will be entitled to 'special training' through regular teachers or teachers specifically appointed for the purpose (c) they would then be mainstreamed in regular schools.

Thus, SSA has adopted a more expansive and a broad-based understanding of the concept of inclusion, wherein a multi-option model of educating CWSN is being implemented. The dual objective of embracing this model is to bring more CWSN under the umbrella of SSA and to provide to CWSN appropriate need based skills, be it vocational, functional literacy or simply activities of daily living. Further, an attempt is being made to provide these skills in the most appropriate learning environment.

### **Efforts so far (Data Trends and Performance)**

The implementation of this multi-option model of inclusion in SSA has been made possible due to the flexibility offered to each State by the programme. Although most SSA States have identified and enrolled CWSN in schools, they differ in the approaches and strategies adopted to achieve the ultimate objective of inclusion. States like A.P. and U.P. have conducted school readiness programmes for CWSN with the main objective of preparing CWSN for schools, thereby endeavouring better quality inclusion for them. 69881 CWSN are being covered through various school readiness programmes.

Another practice adopted by SSA States is that of the home-based education for children with severe-profound disabilities with the objective of either preparing CWSN for schools or for life by imparting to them basic living skills. Parental counseling and training on daily living skills are two important aspects of the entire home-based instruction

programme. Through home-based education, SSA has been able to cover 1.16 lakh CWSN. A notable feature of this programme has been an increased and a sustainable school- community linkage by actively involving parents in the educational process of their CWSN.

36 States/ UTs have appointed 20910 resource persons. 777 NGOs (30 states) are currently involved in the IE programme under SSA. By and large all the States have extensively utilized the expertise of NGOs in the areas of assessment of CWSN, teacher training and material development.

Section 29 of the Right to Education (RTE) Act lays emphasis on learning through activities, discovery and exploration in a child friendly and child-centered manner; making the child free of fear, trauma and anxiety and helping the child to express views freely; and comprehensive and continuous evaluation of child's understanding of knowledge and his or her ability. Further it emphasizes on the inclusive approach that needs to be adopted by every classroom teacher while teaching in a mainstream classroom having children with special needs.

Based on this approach, the School Education & Literacy Department had instructed NCERT to develop exemplar material for teachers teaching CWSN at the primary and upper primary level. The handbooks in particular deal with curricular adaptations to be done by the mainstream teachers in regular classrooms, teaching strategies and adapted evaluations. They give simple tips that a regular teacher can adopt in his/her classroom to address the learning needs of all kinds of children with special needs. The material is a teaching aid for teachers and covers sensory disabilities, cognitive, intellectual disabilities and physical disabilities. 1.58 lakh teachers have been given training on this material.

Two additional forms of resource support, complimentary to each other, being provided to CWSN are through assistive devices and barrier free access. Both of these aim enhancements in the functional capacity/ mobility of CWSN to promote their easy access to the schools. 33.01 lakh CWSN under SSA have been provided assistive devices through various modes. Some States like Haryana,



Himachal Pradesh and U.P. have converged with District Disability Rehabilitation Centers, local Red Cross, Composite Regional Centers, NGOs etc. and some States like Kerala and A.P. have made arrangements to provide the necessary equipment to CWSN through the State Government supported organizations – like A.P. Viklaangula Corporative Corporation (APVCC) and Kerala State Electronic Development Corporation (KELTRON). However, the largest provider of aids and appliances to CWSN under SSA is ALIMCO (Artificial Limb Manufacturing Corporation of India), a public sector undertaking functioning under the Ministry of Social Justice and Empowerment (MoSJ&E) with which an agreement has been signed at the national level, as per which 60% of the cost of the assistive devices would be borne by MoSJ&E and 40% by the State SSA Societies.



be covered this year through various interventions and strategies. The current coverage of CWSN is 25.03 lakh.

### Progress in 2015-16

1. 4519 assessment camps conducted.
2. 155373 CWSN have been provided assistive devices.
3. 174397 CWSN provided transport support, and 181343 CWSN provided escort support.
4. 181657 CWSN provided therapy support
5. 9634 CWSN provided surgical support
6. 25008 visually impaired children provided Braille books.
7. 59340 low vision children provided large print books.
8. 115439 teachers given training on curricular adaptations.



Schools are being made more disabled friendly by incorporating barrier free features in their designs 77.37% schools have been made barrier-free and very focused efforts are being made by all the States to cover more schools in a phased manner. Another recent initiative of SSA States has been of providing disabled friendly toilets. Thus far in SSA, 73.44% schools have been provided disabled friendly toilets.

### The Outcome (Impact)

These practices and innovations in SSA are no doubt leading to a gradual increase in identification and enrollment of CWSN. The enrollment of CWSN has gone up to 23.17 lakh CWSN as compared to 11.71 lakh CWSN in 2003-04. More CWSN are likely to

### The Challenges / Issues

However, there are a few important issues in IE that are being continued to be stressed upon by Government of India with the States, namely: -

- (i) The percentage of CWSN identified being only 1.35% of the total child population.
- (ii) Teachers need to be trained on curricular adaptations and more CWSN friendly evaluation methods. States need to begin work on this aspect.



(iii) Specific teacher training modules/ capsules/ programmes need to be designed on Braille, signing, etc

(iv) Quality of ramps in most of the States is an area of concern.

It can be seen from the foregoing that several novel initiatives have been taken up to address the divergent needs of special children. An endeavour has also been made to develop in teachers, the necessary attitude, skills and competencies required to deal effectively with children with various special educational needs. The focus of SSA is now on reaching out to those out of school CWSN, not covered so far and developing a strategy that will ensure that every child with special needs receives continuing on site support. This perhaps is the biggest challenge of all and a crucial determinant of the success of the inclusive education programme under SSA.



# Does smell a scam in disability certificates



## Uber to launch cab service for disabled, elderly today

**Times News Network**  
**New Delhi:** In a first for the city, Uber, an app-based taxi service, has introduced a special service for the differently-abled and the elderly. Called UberASST, the service will become operational from Thursday.  
 "Almost present in every neighbourhood, Uber will be available to assist the hearing and visually-impaired, and those who are unable to board a car without their wheelchair, walkers, and crutches," Uber says.  
 The service will be available in the following areas: Connaught Place, Kirti Nagar, Okhla, and Connaught Place. Uber will be available to assist the hearing and visually-impaired, and those who are unable to board a car without their wheelchair, walkers, and crutches.

# International Day of Persons with Disabilities

## An equitable approach



## He lost legs, art gave him a new life

**New Delhi:** Shubendra Kumar, a 30-year-old man who lost his legs in a road accident, has found a new life through art. He is a member of the National Association of the Deaf and Blind (NADAB) and has been active in various social service activities. He has been instrumental in the formation of the 'Accessible India Campaign' in his hometown. He has also been a member of the National Association of the Deaf and Blind (NADAB) and has been active in various social service activities.

# 15 yrs on, no data or policy for disabled

## Present Government Yet to Form Panels, Implement Promises

**New Delhi:** The 15th anniversary of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) has passed without any significant action from the government. The government has yet to form panels to study the implementation of the convention and has not implemented any of the promises made during the ratification process. The government has also failed to collect any data on the status of persons with disabilities in the country.

# Differently-abled march on for recognition

**New Delhi:** The 'Walk of Freedom' at India Gate was a powerful statement of solidarity with the differently-abled. The walk was organized by National Centre for Promotion of Employment for Disabled People (NCPEDP) and Aarv to mark 20 years of the Persons with Disabilities Act. The walk was attended by people with different disabilities from across the country. The government has yet to take any steps to recognize the contributions of persons with disabilities to the nation.



# Able & they know it, their tales offer a ray of hope

**New Delhi:** Shubendra Kumar's story is a testament to the power of resilience and the ability to overcome adversity. He has shown that with the right support and determination, persons with disabilities can lead a fulfilling and productive life. His story offers a ray of hope to other persons with disabilities who may be struggling to find their own path in life.



# Higher studies for disabled a low point

## From hospitals to bus accessibility a grey area

**New Delhi:** A study by the National Institute of Open Schooling (NIOS) has found that the participation of persons with disabilities in higher education is significantly lower than that of the general population. The study also found that the accessibility of public transport and other facilities is a major barrier to the education of persons with disabilities. The government needs to take steps to improve the accessibility of higher education for persons with disabilities.

# Paraplegic's Mission China to help disabled Indians

## Fingesh Shah assembles motorized wheelchairs using spare parts imported from China at its 40,000 against the average price of Rs 1.25 lakh

**Ahmedabad:** Fingesh Shah, a paraplegic, has started a mission in China to help disabled Indians. He has assembled motorized wheelchairs using spare parts imported from China at a cost of 40,000 rupees, which is significantly lower than the average price of 1.25 lakh rupees. The mission aims to provide affordable and accessible wheelchairs to persons with disabilities in India. The mission has already helped several persons with disabilities in India.

**SOLIDARITY:** People during the walk of freedom at India Gate. The walk was a powerful statement of solidarity with the differently-abled. The government has yet to take any steps to recognize the contributions of persons with disabilities to the nation.

**MAKING A MARK:** Clockwise from top: Supriya, Sonkar & Kallabho. The image shows three people, likely participants in the 'Walk of Freedom' at India Gate. They are holding flags and banners, and appear to be in a celebratory mood.

**WORLD DEABILITY DAY:** The image shows a person in a wheelchair, possibly participating in an event or a protest, with other people visible in the background.

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**MINISTRY OF HUMAN RESOURCE DEVELOPMENT  
 DEPARTMENT OF SCHOOL EDUCATION AND LITERACY  
 GOVERNMENT OF INDIA**