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Module 9

HOW DO I CREATE INCLUSIVE CLASSROOMS?

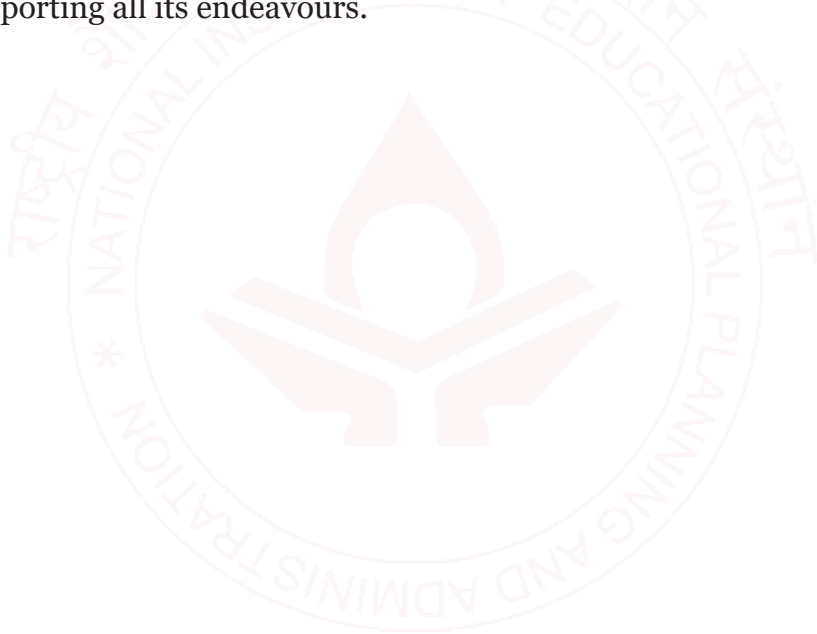
Veera Gupta and Bharti



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Prof. Veera Gupta is Professor, Department of Educational Policy at National Institute of Educational Planning and Administration, New Delhi.

Dr. Bharti is Associate Professor and Head-DICT, CIET at National Council of Educational Research and Training, New Delhi.

KEY AREA
TRANSFORMING TEACHING LEARNING
PROCESSES

HOW DO I CREATE INCLUSIVE CLASSROOMS?

**Veera Gupta
Bharti**



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Introduction

Education in independent India has of late become almost universalised. For many decades, education was practised as the exclusive right of a few. To make it exclusive, the right to education was based on merit, resources, domicile, gender or some other criteria. As a result, educational policies related to admission, exam, classroom discipline, etc, were all exclusionary. Educational functionaries were not concerned about the development of the persons who were outside the boundary walls of educational institutions. As a result, many marginalised categories were created. Due to the latest international conventions, policies and goals, however, education for all as a lifelong process has become the guiding paradigm. It means uprooting the old policies, practices and beliefs. It is a mammoth task. In this module, we will focus on inclusive classrooms, a micro unit of education, and not on macro concept of inclusive educational systems.

The main drawback of exclusion is that it means school is giving up on an individual student.

Inclusive classroom pose new challenges to a teacher. We do know that in a teacher training curriculum, three doctrines are taught. These are: know your learner, know your pedagogy, and know your content. In this triangle of tenets, 'know your learners' is discussed in this module from the perspective of an inclusive classroom. It is because regarding this tenet, a school leader/teacher must know not only the previous academic

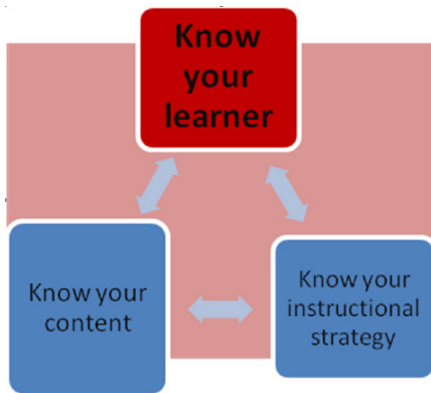


Figure 1: Doctrines Taught in Teacher Training

performance level and socioeconomic status of learners but also about the school environment, disability specific limitations and learning styles arising out of combinations of these. Let us understand these new paradigms of education. Knowledge of these new paradigms is relevant for inclusive classroom.

Earlier it was practised segregating and retaining children based on

abilities. But due to various research and advocacy it was considered that mainstreaming children into age-appropriate classroom setting is most beneficial. Accordingly, age-appropriate admissions have been incorporated as one of the legal provisions in Right to Education Act. Though segregation is not based on abilities, teaching is to be designed as per capability of the child. That means a teacher is posed with the challenge of accommodating different levels of learning, intelligence, types of strengths and impairment in a regular classroom. What are the tools available with teacher to handle such a classroom? The latest tools are Universal Design of Learning (UDL), Inclusive Education Plans, curricular adaptations, and examination provisions etc.

Know Your Learners:
Learning Styles
Their impairments

For an inclusive classroom, a school leader/teacher needs to learn to structure their lessons and differentiate the materials so that all students can access capability and curriculum appropriate material. It helps all students to learn regardless of their learning differences. UDL incorporates the use of various learning aids, curricular adaptation, and

examination provisions to allow all students to access learning. The Individualised Education Plan (IEP) helps in designing an inclusive classroom. That you are going to learn in the second section of the module.

The third paradigm of inclusive classroom is child centric teaching methodology. In this strategy lecture time is limited and activity time is more. Accordingly sitting arrangement is not in rows but is set up as working stations. Each station has a group of students carrying out activity as per their learning level in the same classroom with peers. These peers could be with or without impairment. Curriculum adaptation is one of the important segments of child centric learning. That you will learn in the third section of the module.

In this module, we will discuss only these three paradigms. The first section is on learning styles while the second and third sections are on UDL & IEP and curricular modifications respectively.



Learning Outcomes

On completion of the module, school leaders will be able to

- Build understanding of an inclusive classroom and learn about Instructional Strategies for Different Impairments and Learning Styles
- Develop lesson plans for inclusive classrooms
- Understand various approaches to curriculum adaptation and make use of them in their classroom according to the need of students

Sections	Topic
Section 1	Mapping and Documenting Learning Styles of Students, Strengths, Impairments of the Student and School Environment
Section 2	Designing a Lesson Plan and Individualised Education Plans
Section 3	Adapting Curriculum for Inclusive Classrooms



SECTION 1

MAPPING AND DOCUMENTING LEARNING STYLES OF STUDENTS, STRENGTHS, IMPAIRMENTS OF THE STUDENT AND SCHOOL ENVIRONMENT

Learning Objective: School leaders will understand learners' abilities; impairments, learning styles and school environmental factors to make a classroom inclusive

Key Words: Inclusive Classroom; Know your learners; Learning styles; Inclusive school environment

Introduction

Let us first revisit what an inclusive classroom is. As we already know, an inclusive classroom is a general education classroom in which students with and without disabilities learn together. It is essentially the opposite of a special education classroom where students with disabilities learn only with other students with disabilities. Secondly, let us also revisit the core skills required to be developed in a student through educational processes. These are reading, writing, numeracy, spatial and perceptual abilities. In this section, we shall study how different impairments of learners having different learning styles can be catered to develop the above-mentioned core skills.

Use of Senses in Learning Process

To learn a concept, we need all our senses to work in harmony. All our senses collect inputs and our brain integrates these inputs to make us understand it holistically. For example, the senses involved in recognising a banana may include touch (length, shape, and texture), sight (colour: yellow or green, shape: long, round, large, etc), sound (crunching and chewing), smell (fresh or rotting) and taste (more sweet or less sweet). These senses include Auditory (perception of sounds) Visual (perception of colour, shape, size, depth and distance), Tactile (the perception of touch relating to pain, pressure and temperature) Olfactory (perception of smells), Gustatory (perception of taste), and finally brain.

The physical organs help in carrying the message to the brain and the brain synchronises and interprets this message for learning to happen. If there is impairment in any of the organs or in brain, learning is hampered. Therefore, a teacher needs to identify if there is any impairment in any of the sense organs about carrying the message or in the brain in processing the message. Knowing the impairment of the learners is one of the requirements to design a lesson plan. We have learnt about various

disabilities in another module and hence we shall not discuss them here. However, you may like to refer to the RPWD Act 2016.

Learning Styles

Generally, all of us use all our senses, i.e., vision, auditory and kinetic senses, together in order to receive information. But it is found that one of the receiver senses is dominant in a person compared to the other two senses. Therefore, the dominant receiver sense may be called his/her learning style. You may recall which style was your preferred style when you were under pressure of time or resource. For example, did you write, discuss, or saw the picture in your mind? If you wrote bullet point to remember, you are kinetic; if you discussed, you are auditory; and if you made picture in your mind, you are a visual learner. However, the dominant style may not always be the same in an individual for all tasks. The learner may prefer one style of learning for one task, and a combination of others for another task. It is known as the Visual, Auditory and Kinetic (VAK) learning style. An assessment inventory is available on the website for standard assessment. It is freely available to all. Please use it for determining your style and encourage teachers to use it to assess their students as well. Web address is given in the reference. It is very important to learn about learning styles to improve teaching. It is even more important in an inclusive classroom because one or more of the sense organs may be impaired and dominant learning style may get further compromised. For example, perception is enhanced by visual input if my vision is impaired then I may not be able to learn through vision. In such a situation, instructional strategies and use of assistive technology help overcome physical impairment of the student. It will allow student to learn as per his dominant learning style, i.e., visual without having to compromise due to impairment in vision.

Instructional Strategies for Different Impairments and Learning Styles

Generally, all teachers need to present information by using all three styles, more so in an inclusive classroom. A student who has impairment in vision may have to develop another learning style which may not be his dominant style. But if s/he does so, learning may get delayed or compromised. Therefore, the knowledge of impairment, learning style and available assistive technology and devices become crucial for a teacher in an inclusive classroom. We may learn it by the help of following table.

S.N.	Impairment	Dominant Learning Style	Instructional Strategy	Assistive Aid
1.	Visual	Visual	Perceptual input through touch	Word and embossed pictures
2.	Visual	Auditory	Lecture, discussion	Audiotapes
3.	Visual	Kinaesthetic	Activity, Practical exercises	Interpreter/ Simulation software

In this way a teacher may learn about impairment, learning style, choosing appropriate instructional strategy and assistive device. As we know, all impairments could fall either in one or more sense organs or in the neuron path to process the information. In this way we may categorise all 21 specified disabilities given in the RPWD Act 2016 into four categories. Similarly, learning styles are of three types. In this way, broadly a teacher must sharpen her skills for twelve types of combinations of instructional strategies and learning aids to be used in an inclusive

classroom. All students with or without impairments and having all learning styles can be helped with medical and educational assistive devices. An example is presented below.

S.N.	Impairment categories	Medical Aids to be used to Help with Impairment	Educational Aids to be Used for Learning Styles	ICT and Assistive Technologies
1.	Vision impairment, low vision	Corrective surgery, glasses,	Braille, large font, , concrete objects, magnifying lenses	Computer software to give audio and embossed output, text to speech software, NVDA, JAWS etc. Mathematics content in MATHML format and other content in DAISY
2.	Hearing impairment	Surgery, hearing aids	Sign language, video, chart, graph, real objects,	Introductory video containing topic and sub-topic, objectives, outcome expected from learner Use of graphics and visuals with intonation markings facilitating reading such as phrasing/syllable marking, text with hyperlinks to explanation videos, story character with speech bubble or thinking clouds
3.	Locomotors, Dwarf, Cerebral Palsy, muscular dystrophy	Surgery, adapted furniture, mobility aids, artificial limbs	Help in practical exercises.	e-SAADHYA, key word descriptor, Worksheets and Online activities from various online sources (https://www.twinkl.co.in/resource/t-n-2245-maths-is-fun-display-lettering-)

4.	Intellectual impairment: dyslexia, Autism, mental retardation	Therapies	Audio video input, picture dictionary, spell checker, mind maps, calculators	Literacy Support Software (https://www.cricksoft.com/uk/clicker/win-mac) Adapted Colour Coded and Rugged Keyboards, Mini Keyboards, Perfect Keyboard, GBoard, FlexiKey Apps for adapted keyboard, Assisted and Augmented Communication Apps and devices such as 'AVAZ, 'Jellow Plus', and 'KAVI PTS' 'Go Talk', 'Quick Talker', (https://www.attainmentcompany.com/catalogsearch/result/?q=go+talks)
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A teacher should prepare a detailed Inclusive Educational Plan (IEP) incorporating learners' profile along with instructional design. Detailed IEPs have been discussed in Section 2.


School Environment

Inclusive classrooms do not exist in isolation. They are a part and parcel of the school ethos. Therefore, the school principal or a system level official should also ensure that school environment fosters an inclusive and larger school community. At institutional and system level, all staff, teachers and officials must show respect for diversity. It means there is recruitment of people from all races, backgrounds and those having different strengths. This diverse group serves as the resource group in case a student needs any help related to discrimination and oppression. An inclusive school environment welcomes all. All students help each other. Teachers collaborate with each other. Staff, teachers and students treat one another with respect. There is partnership between staff and parents. Local community is involved with school and government. Inclusive school environment is the key to an inclusive classroom.

Let us sum up

To create inclusive classroom, a teacher must learn to appreciate each individual and learn about their learning styles. Students may have one or more dominant learning styles, i.e., visual, auditory and kinetic. A teacher should prepare an instructional plan while keeping in mind the individual needs, learning style and impairment, if any, and with suitable assistive educational aids. An inclusive classroom is the product of an inclusive school ethos. Schools should exude a culture of diversity and individual dignity.





SECTION 2

DESIGNING A LESSON PLAN AND INDIVIDUALISED EDUCATION PLANS

Learning Objective: This will enable school leaders to mentor and monitor the planning and implementation of IEP. Teachers will be able to develop lesson plans for inclusive classrooms and also incorporate the IEP objectives (for a CWD) in the lesson plan; making the lesson plan truly inclusive.

Key Words: IEP; Lesson Plan for inclusive classroom; Inclusive pedagogy practices.

Introduction

The inclusive classrooms have students with and without disabilities, sitting together in the same physical space and learning through same/similar teaching learning activities, sharing the appropriate teaching learning support materials. During the lesson plan designing, the objectives, TLM assignments need to be adapted, accommodated or modified as per the nature of needs of students in the inclusive classroom.

The prerequisites for being able to do the same include the following.

- Sound knowledge of students' abilities and disabilities leading to special educational needs.
- An understanding that special education needs may arise without any disability and a student without disability may also have a special education need.
- An understanding of the difference between Individualised Education Plan (IEP) and the Inclusive Lesson Plans for the whole class.
- An ability to put into practice the principles of Universal Design of Learning (UDL)

The paragraphs below attempt to discuss the necessary details so that the readers are equipped with the fundamental knowledge and aware of the basic principles essential for creating inclusive classrooms. The Samagra Shiksha framework, in harmony with RPWD Act 2016, also recognises IEP as essential instrument in providing individual support to the children with special needs (CWSN), and the need to regularly monitor its implementation.

In the present section, we will also learn how to design a lesson plan for inclusive classroom, while accommodating the needs of all learners. In

simpler words, the objectives and teaching learning strategies in the plan would be modified in the light of the special education needs of the students studying in the inclusive education settings.

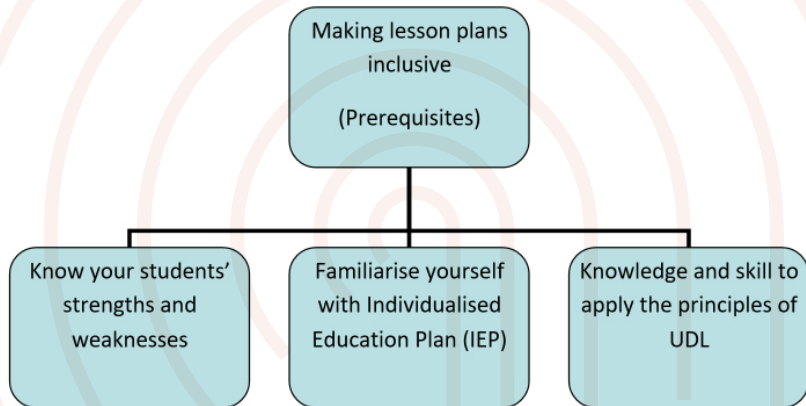


Figure 2 : Designing of lesson plan for Inclusive Classroom

Lesson Plans

You must have made lesson plans during your pre-service teacher education. The format of the lesson plan essentially requires --- objectives of the plan, previous knowledge, teaching learning activities, feedback, home assignment, and blackboard work, apart from the information like class, topic, subtopic, etc. An Individualised Education Plan (IEP) has some similarities with that lesson plan as it also requires objectives, teaching learning material, information about previous knowledge and skills, etc. The difference between a lesson plan and an IEP lies in the target group addressed. A lesson plan is designed while keeping in mind the average abilities of a group of learners sitting in a class, whereas the focus of an IEP is only on one child, and that too on the child with disabilities or child with learning difficulties, or a child requiring some modifications in the teaching learning environment or pedagogy practices that may promote better participation in the classroom

activities. The objectives of a lesson plan are short term and are applicable to only one lesson/class of the 40 to 45 minutes duration. On the other hand, the objectives of an IEP have comparatively long-time duration, extended to one week or several weeks, depending on the progress made by the child. An IEP is one of the major practices of special education which was adopted for inclusive education.

The special educational needs arising due to disabilities may be similar to the needs of children having no disabilities. For example, a few students in the class may prefer written work over oral responses. The reason could be shyness, fear to speak in front of the class, stuttering, or speech impairments. Similarly, students often ask a teacher to repeat the instruction or questions, as they might not be paying attention or teacher voice may not be audible at the back side of the classroom or to the student sitting near the window, or the student might be facing hearing challenges due to hearing impairments.

The first step in making inclusive lesson plans is to become familiar with your learners. As a teacher, I am aware that my students are at different levels of learning and have diverse learning styles. On the basis of learning levels and achievements the entire class can be divided into ---

- Level 1—the initial level of learning,
- Level 2—the intermediate level of learning
- Level 3—the higher level of learning.

The reasons for learning level 1 might be an outcome of numerous factors such as educational backlog, inaccessibility to curriculum, un-appropriate format of teaching learning material (say for example giving printed worksheet to children with visual impairments), no support for learning at home, special educational needs arising due to disability conditions (such as hearing impairments, intellectual disabilities, learning disabilities, autism, etc) and low achievement motivation, etc. Similarly, numerous factors responsible for learning level 2 and 3 can be listed. In

case, the class has a child with disabilities, discussion with the special educator in the school and parents regarding the child's abilities and IEP and its long- and short-term objectives becomes an essential part of knowing the child.

Once the teacher becomes familiar with the students in terms of their abilities and special needs, the next step is to plan the objectives for the lesson plan. The objectives need to be in harmony with the identified need of the learners, irrespective of the causal factors.

Let's see an example of modified objectives, for a class having a student with learning disabilities (LD) (learning level 1), a student with hearing impairments (HI) (learning level 3) and three students with educational backlog, few students who are at learning level 3. The text is taken from EVS, textbook NCERT, for class 3.

Lesson: Poonam's Day Out

Class: 03

Subject: EVS

Specific objectives

Through this lesson, students will be able to--

- List animals from their environments
- Recognize animals from their sounds and habits
- Classify the animals as having wings, feet, tail
- Identify animals that can walk, hop or fly

This class has a student with HI so the objective of identifying animals from their sound (*italicised*) should be modified to accommodate the special education need of this student. The modified objective could be "Recognise animals from their sounds and habits", while involving the class in making noises like dog, cat or crow, the teacher should also encourage a student with HI to try making the sound with sensing

vibrations in his throat through fingers, and also encourage other children to sense the vibrations in their own throat and also of their peers while making sounds. For students at the learning level 1, the objectives can be modified as ---

- Verbally list animals from their environments
- Identify animals in their environment from the given pictures
- Identify animals that can fly and those who can't fly

For students at the learning level 3, more objectives can be added—

- Identify the features of body parts that help animals in living comfortably in their natural habitat and also how these features help animals to hop, fly or walk

Let's see the objectives made by another teacher. This time the class has a student with visual impairment, two students with speech impairments and four students facing problem with the medium of instruction. The teacher has made following objectives, for teaching mathematics to class 6 (Reference: Mathematics textbook, class 6, NCERT).

After the completion of this class the students will be able to –

- Identify the constants and variables in the given algebraic expressions
- Categorise the algebraic expressions into monomials, binomials, trinomials, etc.
- Verify the one variable simple algebraic equation (match the value of LHS and RHS), if more than one value of the variable is given.

Before moving ahead, please modify the above objectives, according to the needs of the students present in the class.

The next step is to collect the teaching learning material. While preparing the TLM, it is always useful to keep in mind the principles of Universal Design of Learning (UDL) which advocate nothing but multiple means of engagements, multiple means of expressions and multiple means of representation. For the EVS topic, mentioned above, the teaching learning material could be pictures of animals and their babies, miniatures of animals, recording of animal sounds, videos of animals, etc. As the class doesn't have any child with visual impairments, there is no need of animal names written in Braille script. Rather a video showing the names of commonly found neighbourhood animals in sign language should be procured and played in the class.

Teacher may include a game of matching animal pictures with their name slips or of categorising animals, and then encourage students to justify the basis of their grouping of animals. Teacher may also initiate an activity of grouping the shared list of animals on blackboard, without sharing the basis of grouping. The students can ask only 30 questions to which the teacher can answer only in Yes and No.

Next, as a teacher, some classwork or homework needs to be designed either in the form of worksheets or projects. Continuing with the example of Class 3 EVS lesson above, the teacher may like to give the following worksheets designed at the three levels of learning, to the children as either classwork or home work.

Worksheet Learning Level **1**

1. From the list of animals given below, circle the animals with long tails and draw a square around name of animals with short tails.
2. Copy the names of the animals circled and squared in your notebooks.
3. Circle the correct choice for each animal listed below:
 - a. Pigeon Hope or Fly
 - b. Cat Hope or Fly
 - c. Rat Hope or Fly
 - d. Cockroach Hope or Fly
 - e. Honey bees Hope or Fly
 - f. Crow Hope or Fly
 - g. Sparrow Hope or Fly
 - h. Frog Hope or Fly

Worksheet Learning Level 2

1. Write the name of two animals each, with long and short tails.
2. From the list of animals given below, write whether the animal walks or flies:
 - a. Pigeon
 - b. Cat
 - c. Rat
 - d. Cockroach
 - e. Honey bees
 - f. Dog
 - g. Cat
 - h. Lizard
 - i. Buffalo
 - j. Turtle
 - k. Goat
 - l. Elephant
3. Draw the picture of your favourite animal and also colour it

Worksheet Learning Level 3


1. What could be the function of a tail for animals?
2. Why the beaks of different birds differ from one another?

Each student should get an opportunity to move from the worksheet 's Level 1 to Level 3

The point to be remembered is that all students will be expected to attempt worksheets of all levels of learning and given equal opportunity to move from Level 1 to Level 3 of learning, with Level 3 being the highest. The lesson plan designed in this manner follows a differentiated instruction approach to learning. The regular teachers teaching in an inclusive classroom may seek the support of the a special teacher during the planning of activities, assignments and learning strategies. When planning is done while keeping in mind the needs of the class as one unit but without ignoring the needs of individual students, then the lesson design becomes inclusive, and the plan can be termed as Inclusive Education Plan, which is different from the IEP.

Let us sum up

A group of students with disabilities is a diverse group in itself and many students with disabilities may be talented or gifted in one or another area. The special education needs of students with and without disabilities may be of a similar nature. An IEP addresses the educational and other needs of a child with disabilities. When the objectives of an IEP are considered significant while designing the lesson plan for a classroom having students with and without disabilities, the lesson plan practically becomes an inclusive education plan. The inclusive lesson planning needs to be prepared by assuming that students are at any one of the three levels of learning. This includes the framing of lesson objectives at the identified three levels of learning, and implementation of the entire plan accordingly. The teaching learning materials and the activities in an inclusive classroom usually adopt the practices based on UDL.



SECTION 3

ADAPTING CURRICULUM FOR INCLUSIVE CLASSROOMS

Learning Objective: School leaders will familiarise themselves with various approaches to curriculum adaptation and to adapt the curriculum in accordance with the need of students in your class. You will also be able to develop unit plans for the adapted curriculum.

Key Words: Curriculum adaptations; Approaches to curriculum adaptations; Sample of adapted curriculum; Adapted unit plans

Introduction

Contrary to the popular belief, curriculum is beyond the academic processes in a school. It is the sum total of entire experiences that students have in the physical space called school. These experiences include planned experiences as in the classroom teaching learning, laboratories, libraries, playground, etc, and also the unplanned spontaneous experiences of being part of a group performing on stage, attending a workshop, being a part of the classroom, being a member of a group for a project or assignment, etc. In inclusive settings, the prescribed curriculum may need to be adapted to suit the needs of children with disabilities. The ‘adapted curriculum’ preserves the spirit of the prescribed curriculum; however, it goes beyond in terms of providing learning opportunities tailored to the special needs of students with disabilities.

The related literature and research evidence indicate a variety of approaches for curriculum adaptation; prominent being decision-making process, linking Individualised Education Plan (IEP) with the curriculum and nine types of adaptations. This section will discuss each approach to curriculum adaptations in brief.

Curriculum Adaptation

As a teacher, you are aware that a curriculum is prescribed, pre-planned, differs with age and abilities of the students. The purpose of the curriculum contributes to what we call as “education.” One can understand the prescribed curriculum as the general curriculum, whereas, adjustments, accommodations and modifications made in the general curriculum with respect to identified or perceived needs of students arising due to disabilities can be termed as the adaptations made in the curriculum. This modified curriculum is termed as adapted curriculum.

As mentioned earlier, the adaptations in the curriculum can be made either by making some modifications in the prescribed general curriculum or by accommodating the special needs of the students with disabilities within the general curriculum or by both, modifications and accommodations. Modifications may raise or lower the curricular expectations through careful selection of the curricular content while mapping the same with the special needs of students with disabilities.

On the other hand, the accommodations do not alter the curricular expectations but find a compromise between the special education needs of students with disabilities and general curriculum. In other words, “when the curricular expectations are more or less the same but the transaction modalities, assessment procedures, teaching learning resources are altered to make them more accessible, the alterations/ changes made are called accommodations” (Source: Block 3: Curriculum Adaptations and Accommodations, Advance Certificate Course in Cross Disability, RCI, page 12.)

Let’s try to understand each approach in detail before attempting to adapt curriculum in accordance with the approaches discussed.

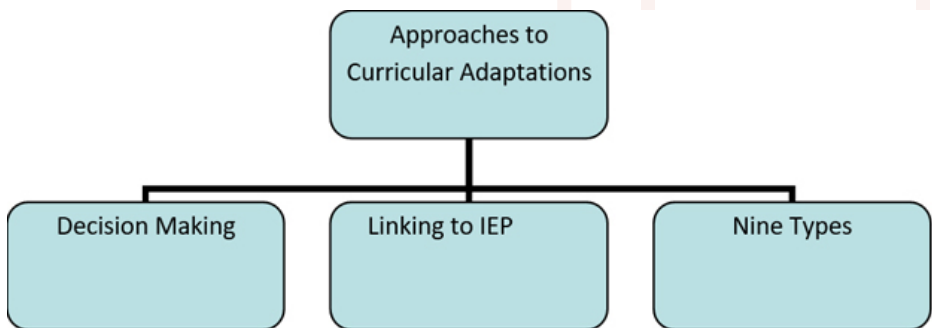


Figure 3 : Approaches to Curricular Adaptations

1) Decision Making Approach to Curriculum Adaptations

This is an exhaustive approach to curriculum adaptations, and it starts from identifying the individual needs of a student with disabilities, followed by setting of appropriate educational goals and objectives in harmony with the overall objective of the general education and grade level curricular expectations. This is then followed by a determination of what to teach and how to teach, through selection of appropriate adaptations such as instructional arrangements, lesson format, student specific teaching learning strategies, physical and social environment of the classroom and procuring modified materials. The last step is to assessing the effectiveness of the adaptations and moving ahead with or without further necessary changes.

The team attempting to adapt curriculum following this approach should reflect on the questions –

- a. If the teaching learning activities aren't modified, will the student with disabilities be able to participate in it? Will he/she be able to achieve the outcomes at par with his/her peers without disabilities?
- b. Can the participation of student with disabilities be increased by changing the instructional arrangements from traditional arrangements to small groups, peer learning, cooperative groups, etc?
- c. Can the participation of student with disabilities be enhanced by changing the lesson format from traditional to thematic/interdisciplinary/experiential/discovery learning?
- d. Do the special needs arising due to disability require alterations in the curricular goals, in terms of performance standards (raising or lowering) and curriculum content (making it less/more complex, focussing on functional applications of content)?

- e. For facilitating the participation of student with disabilities, what changes should be made in the classroom environment --- both physical and social environment?
- f. What kind of changes --- such as varying the size, number, input/output modes, and reduction of abstract information --- need to be done in the teaching learning material to ensure maximum participation of students with disabilities?
- g. What kind of support --- such as that from peers, assistant teacher, shadow teacher, para professionals, and resource teacher --- is required by students with disability for maximum participation in the teaching learning activities?

2. Linking IEP with curriculum adaptations

The goals of IEP are carefully studied and opportunities are found within the general education curriculum to establish linkages between the two. For this, the flow of actions is usually in the direction described below. These may start from the following.

- a. From curriculum as it is — The general education curriculum is kept as its as far as possible with minor or negligible changes
- b. From different objectives within the same activity and curriculum — This is in accordance with the principle of partial participation, and the examples may include allowing the child with short attention/hyperactivity/ dysgraphia/eye-hand coordination issues, etc, to complete 5 out of ten writing items in the worksheet, during oral reading time the child with speech impairments allowed to finger trace the paragraphs read by peers, and during history lessons instead of focussing on the names and dates the students may be allowed to focus on the pros and cons of the events.
- c. By adapting the environment and the material — Keeping in

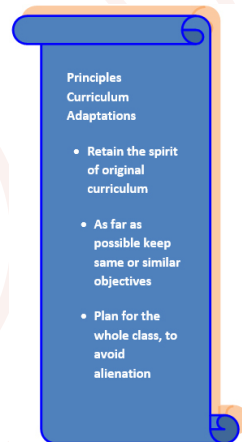
mind the abilities of the students and nature of challenges faced due to disabilities, multiple means of representations (oral, visual, tactile, ICT based), expression and engagements in line with Universal Design of Learning can be used to make desired alterations in the environment and material.

- d. By providing physical assistance as and when required such as in switching on and off equipments, accessing material kept in almirah, moving around the school, etc.
- e. By substituting the curriculum – if and if everything else fails. This is to be done as the last resort.

3. Nine types of adaptations –

This is more related to the classroom instructions which are also a part of the curriculum. While designing the instructional plan and accommodating the special education needs, the following nine points needs to be kept in mind:

- 1) Input method
- 2) Output expected
- 3) Time required
- 4) Level of difficulty
- 5) Level of support
- 6) Size of the content
- 7) Extent of Participation
- 8) Alteration in goals and objectives
- 9) Need of substitute objectives or goals



The following guidelines need to be considered and remembered while adapting the curriculum. The principles are applicable to all the three approaches discussed above.

- The adapted curriculum should retain the spirit of the original and, as far as possible, should attempt to provide similar learning experiences to all the learners
- Keeping the objective of instructions as the same, as far as possible, the adapted activities and teaching learning materials should facilitate access to holistic experiences, for example, if the whole class is looking at the visuals of animals, then a replica of the scale along with auditory inputs should be made available to the students with vision difficulties
- The modifications and accommodations should not make the students without disabilities feel left out or ignored and vice versa. For example, if the teachers allow thumbs up for “Yes” and thumbs down for “No” as accepted answers for yes and no questions, then the whole class should follow this rule, without exception.

Reference: adapted from Block 3: Curriculum Adaptations and Accommodations, Advance Certificate Course in Cross Disability, RCI

Let us assume that there is a student with dyscalculia studying in Class 5, in inclusive education settings. The syllabus developed from the prescribed curriculum for Class 5 by NCERT comprises the following:

Geometry (16 hr)

SHAPES & SPATIAL UNDERSTANDING

- Gets the feel of perspective while drawing a 3-D object in 2-D.
- Gets the feel of an angle through observation and paper folding.
- Identifies right angles in the environment.
- Classifies angles into right, acute and obtuse angles.
- Represents right angle, acute angle and obtuse angle by drawing *and tracing*.

- Explores intuitively rotations and reflections of familiar 2-D shapes.
- Explores intuitively symmetry in familiar 3-D shapes.
- Makes the shapes of cubes, cylinders and cones using nets especially designed for this purpose.

Numbers (40 hr)

NUMBERS AND OPERATIONS

- Finds place value in numbers beyond 1000.
- Appreciates the role of place value in addition, subtraction and multiplication algorithms.
- Uses informal and standard division algorithms.
- Explains the meaning of factors and multiples.

MENTAL ARITHMETIC

- Estimates sums, differences, products and quotients and verifies using approximation.

FRACTIONAL NUMBERS

- Finds the fractional part of a collection.
- Compares fractions
- Identifies equivalent fractions.
- Estimates the degree of closeness of a fraction to known fractions ($1/2, 1/4, 3/4$, etc.)
- Uses decimal fractions in the context of units of length and money.
- Expresses a given fraction in decimal notation and vice versa

MONEY (5 hr)

- Applies the four operations in solving problems involving money.

MEASUREMENT (26 hr)

LENGTH

- Determines area and perimeter of simple geometrical figures.
- Applies the four operations in solving problems involving length, weight and volume.
- Relates commonly used larger and smaller units of length, weight *and volume and converts one to the other.*
- Applies simple fractions to quantities.
- *Converts fractional larger unit into complete smaller units.*
- *Appreciates volume of a solid body: intuitively and also by informal measurement.*
- Uses addition and subtraction in finding time intervals in simple cases.

DATA HANDLING (6 hr)

- Collects two-dimensional quantitative data.
- Represents the data in the form of a table.
- Draws a bar graph or a pictograph to present a data.

PATTERNS (6 hr)

- *Identifies patterns in square numbers, triangular numbers.*
- *Relates sequences of odd numbers between consecutive square numbers.*
- Makes border strip and tiling patterns.

Since the student has specific learning disabilities in the mathematics, the focus of curriculum adaptations should be on the functional aspects of mathematics and its practicability in the day-to-day life. Keeping this in mind, the sections that are italicised and underlined in the syllabus mentioned above needs to be either deleted or avoided during the teaching-learning of mathematics in the classroom. The time devoted for these sections need to be utilised in drill and practice of the content in which the child is facing difficulties. The nine-point adaptations should be used during the instructional planning and teaching learning material and activities to focus more and more on the experiential learning.

Role of Principal/ Administrative officials in Curriculum Adaptation

A few adaptations can be made by a teacher in the classroom, as far as the learning objectives are being met. But when we have to alter the learning objectives, reduce syllabus or provide facilities in term of extra time or aids, it may require prior permission from the

Case Study

Pari was showing symptoms of incomplete classwork and homework. She was also writing grammatically incorrect sentences during the unit test but was able to write key words in the answer. Teacher could sense the problem but could not solve it. She reported it to the principal. The principal discussed with parents and asked for a clinical diagnosis. Parents got Pari diagnosed as having dyslexia and ADHD by a clinical psychologist.

The principal then asked teacher to give exemptions from studying the third language in junior classes. The principal sent her case to the examination board to replace the second language with another subject in tenth class and also provide extra time.

With such curricular adaptations in the school, Pari could complete her education and eventually became an MBBS doctor.

principal or from higher administrative functionaries. Most of us are aware of the provisions prescribed by the examination board but most of the time we find that those very provisions are not being provided in the lower classes. The scenario can be changed by the intervention of the principal. The principal should see to it that curriculum is being adapted in the junior classes. For that, teachers need to be motivated and monitored. Besides that, the principal should also take initiative to seek approvals from higher authorities, if need be.

Let us sum up

In the inclusive education settings, the prescribed curriculum and the syllabus may require some major or minor adaptations, depending on the special education needs of students with disabilities. The curriculum and the corresponding teaching learning strategies may be adapted by using any one of the three approaches or finding a best fit solution, drawing upon the three approaches, namely, the decision making, linking with IEP and nine-point adaptations. The guiding principle of curriculum adaptations recommends retaining the prescribed curriculum as it is, with minimum or no changes, as far as possible. The goals and objectives of the curriculum should be substituted only if everything else fails.

References

1. Rehabilitation Council of India. Curriculum Accommodations and Adaptations. Advanced Certificate Course in Inclusive Education (Cross Disability). Retrieved from <http://www.rehabcouncil.nic.in/writereaddata/Block3accie.pdf>.
2. Centre for Universal Design. (2007). Principles of Universal Design. Available at <https://design.ncsu.edu/research/center-for-universal-design/>
3. Class 3, EVS textbook, NCERT
4. Class 6, Mathematics textbook, NCERT
5. Draft Framework of Samagra Shiksha, MHRD
6. Elementary School Syllabus, NCERT
7. Learning Styles at <http://www.learning-styles-online.com>
8. Curriculum Adaptation VI (1999). Retrieved from <https://paperzz.com/doc/8169135/06-curriculum-adaptation>
9. Curriculum Modifications & Adaptations. Tools for Teachers. Retrieved from <http://njcdd.org/wp-content/uploads/2016/08/tools-teacherspart2.pdf>
10. VAK Learning Styles Self-Assessment Questionnaire. Retrieved from https://www.businessballs.com/freepdfmaterials/vak-learning_styles_questionnaire.pdf

Additional Reading

Audio of Prof. Anupam Ahuja, NCERT Audio file [click here](#)

Assessment: Multiple Choice Questions (MCQs)

- Q1. Which of the following is not an approach for adapting a curriculum?
- Decision making
 - Linking IEP
 - Nine-type adaptations
 - Dilution of content
- Q2. A leprosy-cured student may have impairment in regard to:
- sight
 - hearing
 - intellect
 - none
- Q3. An inclusive classroom is one in which students without disabilities study along with
- students with disabilities
 - students from disadvantaged sections of society
 - students with disabilities and disadvantages
 - none of the above

- Q4. For an individual, learning styles
- vary from situation to situation
 - always remain the same
 - don't depend on the dominant receiver senses
 - can't be assessed
- Q5. The first step in making inclusive lesson plan is to
- Become familiar with the needs of learners
 - Decide the objectives
 - Prepare TLM
 - Think of success criteria

Ans: Q.1-d, Q.2-d, Q.3-c, Q.4-a, Q.5-a







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NATIONAL CENTRE FOR SCHOOL LEADERSHIP
 NATIONAL INSTITUTE OF EDUCATIONAL PLANNING
 AND ADMINISTRATION
 17-B, Sri Aurobindo Marg, New Delhi-110016 (INDIA)
 EPABX Nos. : 91-011-26565600, 26544800