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# UNIT 5 STRATEGIES OF TEACHING-LEARNING AND EVALUATION

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## 1.1 INTRODUCTION

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In the previous units, you have understood that inclusive education can be helpful for all children including children with special needs in identifying and overcoming barriers to learning. There have been paradigm shifts in use of appropriate teaching-learning approaches in the inclusive classroom. It is very important to visualize inclusive education in terms of children's learning capacity, learning difficulties and curriculum. Go through the table given below and appreciate the principles of inclusive education and try to relate with teaching-learning strategies of the inclusive classroom.

**Table 5.1. Principles of Inclusive Education (IE)**

Factors	What IE is not...	What IE is...?
Learning capacity	Establishes a hierarchy of cognitive skills to measure the abilities of each student	Highlights the learning potential of each student to be discovered and stimulated
Learning Difficulties	Learning difficulties are seen as deficiencies in student capabilities	Learning difficulties are seen as a need to reform curriculum and teaching and learning processes
Curriculum	Alternative curriculum designed for 'low achievers'	Common curriculum for all Students. Highlights active participation of students in the learning process

If each student's learning potential is to be discovered, stimulated and active participation in the learning process to be ensured, the instructions need to be designed in such a way that all children including those with different abilities are benefitted. Teaching practices need to be more flexible and effective as every child is different in his/her needs and learning styles. For example, while teaching a child with hearing impairment, you extensively use black board, visual aids such as charts, flow diagrams and models along with slow and clear speech. Don't you think these visual strategies will also help all children in your class? Yes, children without disabilities will also appreciate. If you have a child with visual impairment, then the teacher has to ensure that besides visual strategies, he/she also explains orally and uses models that the child can explore by tactile sense. This also helps all the other children in the classroom. The children who are slow in learning would fail to understand even a simple concept if they are not exposed to small and repeated step- wise demonstration of each concept. An effective teacher uses all these skills in his/her class. The teachers of inclusive classrooms need to understand and use effective instructions which help all the children to learn and use them in real life situations. In this unit, you will get familiar with some effective and important instructional strategies that you can use in the inclusive classroom.

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## **5.2 OBJECTIVES**

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After reading this unit, you will be able to:

- Appreciate the principles underlying teaching-learning in an inclusive classroom;
- Identify suitable strategies for an inclusive classroom;
- Describe and use Universal Design for Learning (UDL);
- Plan Differentiated Instruction (DI) for diverse learners;
- Undertake continuous comprehensive evaluation (CCE);
- Report the progress and provide feedback.

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## **5.3 UNDERSTANDING TEACHING-LEARNING IN INCLUSIVE CLASSROOM**

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Over the years, teachers have been engaged in the teaching-learning process of students who did not have any special needs. Of course, the teachers used to have diverse students who were different in terms of intellectual, social and emotional capabilities; motivation and interest; family and social backgrounds and such other variations. There are also examples of multi-grade teaching where the teacher is asked to teach students of different grades. However, the teachers never ceased their efforts in providing quality learning experiences to those diverse students including the average ones.

But today, our classrooms are more inclusive, and now diversity is the norm. The students are from varied backgrounds; different abilities are part of the classroom. Hence, the teachers need to equip themselves in effective teaching – learning strategies to justify their roles in the inclusive classroom.

We need to appreciate the philosophy and principles of inclusive education in the context of the teaching-learning process. Inclusive practice intends to protect the rights of every student and expects the system to change- the school, classroom, the teaching-learning strategies and such other related aspects, so that every child gets the opportunity for quality and optimal learning and for enjoying learning together and actively participating in learning activities. Hence, the teacher needs to use effective teaching-learning strategies which are applicable to all types of learners. We shall discuss these strategies in this unit.

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## 5.4 IDENTIFYING INSTRUCTIONAL NEEDS

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Now we are concerned about how the children with special needs would be equal partners and experience the same kind of learning in your classroom where you need to take care of their instructional needs, considering that there can be a few exceptions. In case of a child with severe disabilities, to cope with the curriculum and show progress in it, they may require special arrangements with a special educator and rehabilitation professionals. However, the teacher can meet most of the needs and for this she has to focus on instructions in other life skill areas, such as improving their social skills and activities of daily living.

You may consider the following steps for identifying instructional needs of children with special needs:

- **Identify individual needs and make an action plan:** Individualized Educational Plan (IEP) should be developed for those students; who have special needs. You need to have a list of annual goals for academic and non academic areas for the child which is to be taken care of during the year. Note that IEP is developed based on the child's individual needs, but this does not mean it is an individualized program of one to one teaching for the selected goals. Most of the goals selected in IEP are covered in the classroom while teaching the whole group, but individual needs are kept in mind by the teacher. For example, while teaching how to write a paragraph to the class, if there are children who have a goal to improve spelling as part of their IEP, the teacher involves them more in spelling task while making the class write a paragraph. Expected length of the paragraph may be different for some children who spend time in practising the spelling task.
- **Study the curriculum while identifying instructional needs:** You should begin with an assumption that children with special needs in your classroom will take part and learn content from the prescribed curriculum. The most important task for you is to identify the learning goals for each child with special needs and then translate the curriculum to achievable activities.
- **Decide how children with special needs can participate in the curricular transaction:** All children can participate fully if you provide accommodations (adjustment/adaptation), for example, listening to audio files from a mobile phone if the child finds it very difficult to read, and is given additional instruction, or if required, modifications/flexibility in the curriculum are done. But you need to plan it prior to your instruction. We will learn more about 'accommodation' in the next section.

### Check Your Progress I

- Notes :** a) Write your answers in the space given below.  
b) Compare your answers with those given at the end of the unit.

- 1) If you have a student with hearing impairment in you

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## 5.5 INDIVIDUALIZED EDUCATIONAL PLAN (IEP)

Sometimes, it is very difficult to fulfill the special needs of a child without a specific annual plan. By preparing the annual goals of a child, the teacher finds it more convenient while teaching in the classroom as she/he knows the exact needs of the child. Sometimes the teacher combines the IEP goals of many children which are similar and then teaches the same at group level. But when a goal is unique to a particular child (and not a common goal), then one to one teaching may be planned by the teacher and also extended to be carried out at home (if parents can). For example if Karan's goal is to read and write Braille alphabets or Simi's goal is to learn finger spelling for signing, these goals can only be achieved in separate one to one instruction and with the help of a special educator may be taken. The steps involved in IEP are given below:

- **Identify the child's strengths:** You need to understand the child's background well by collecting information on the child's personal details, family environment and past school history (if any) and so on. This will help you not only to build a rapport with the child but find out his/her strengths in both academic, non-academic and life skill areas.
- **Identify the child's instructional needs:** We have discussed about identifying instructional needs for a child with a special need. Follow the steps to identify them. Considering the child's strengths and limitations, customize and then prioritize the goals (those that can be achieved in a year) and finally make a list of the goals.
- **Separate the objectives to be taken up at group or individual level:** As discussed above, separate the objectives on the basis of being taken up at group or individual levels. In a particular activity, you can also respond to different instructional objectives. For example while teaching the properties of air (that air has weight), a child with visual impairment can be oriented to weights of different materials (that require tactile manipulation) or a child with hearing impairment would learn different vocabulary related to the activity and use them.
- **Involve the parents:** Parents need to be involved in achieving IEP goals. If same objectives are taken up both at school and extended to home it becomes easier to achieve in addition to expanding the scope for generalization. Always spell out the parents responsibilities clearly and guide them. Good relationships with parents always foster the achievement of the child with special needs.

### Check Your Progress II

- Notes :** a) Write your answers in the space given below.  
b) Compare your answers with those given at the end of the unit.

There are statements given below about IEP. Examine whether the statement is 'TRUE' or 'FALSE':

- Parents should be involved while planning individual goals.
- It will be easy to take up IEP goals on individual level rather than group level.
- IEP records along with progress information help the teacher to communicate well with the parent.
- IEP goals should be evaluated on annual basis and new goals should be set.

## 5.6 EFFECTIVE APPROACHES TO INSTRUCTION

Children with special needs have challenges in learning. We need to handle these challenges effectively while teaching. Let's discuss how certain special needs and other challenges can be addressed. Table 5.2 indicates the teacher's action to compensate if the child has difficulty in certain ability/skill areas.

**Table 5.2: Meeting the Challenge of Teaching in Inclusive Classroom**

Special Need	Area(s) to be Compensated	Ways to present lesson content			
		Auditory	Tactile/ Kinesthetic	Affective	
Visual Impairment	Vision	<ul style="list-style-type: none"> <li>Presenting subject contents and information orally,</li> <li>Reading aloud</li> </ul>	<ul style="list-style-type: none"> <li>Taking on a field trip,</li> <li>Demonstrating,</li> <li>Using Braille</li> </ul>	<ul style="list-style-type: none"> <li>Forming small groups,</li> <li>One to one presentation or Tutorial,</li> <li>Role playing,</li> <li>Connecting to students' interest areas</li> </ul>	
Hearing Impairment	Auditory & Communication	Visual	Tactile/ Kinesthetic	Affective	
		<ul style="list-style-type: none"> <li>Reading article, books with illustrations,</li> <li>Watching Video clips or a slide show,</li> <li>Watching an activity/ demonstration,</li> <li>Sign language</li> </ul>	<ul style="list-style-type: none"> <li>Taking on a field trip,</li> <li>Demonstrating</li> </ul>	Same as above	
Intellectual & Learning Disabilities	Cognition or Processing	Visual	Auditory	Tactile/ Kinesthetic	Affective
		<ul style="list-style-type: none"> <li>Reading article, books with illustrations,</li> <li>Watching video clips or a slide show,</li> <li>Watching an activity/ demonstration</li> </ul>	<ul style="list-style-type: none"> <li>Presenting contents and information orally,</li> <li>Reading aloud</li> </ul>	<ul style="list-style-type: none"> <li>Taking on a field trip,</li> <li>Demonstrating</li> </ul>	Same as above

The above ways of content presentation are definitely beneficial to all children in the classroom. When a teacher presents the subject content through different ways by involving multi-sensory approach and also takes care of their interest and motivation; it helps all types of learners including children with special needs in the classroom resulting in the most effective teaching. Effective instructions need to respond to the characteristics of a diverse group of students as well as be precisely tailored to the unique strengths and needs of each student. This can be achieved using the principles and guidelines associated with (a) Universal Design for Learning (UDL) (CAST, 2011, 2015) (b) Differentiated Instruction (DI) (Tomilson, 2001). UDL provides teachers with broad principles for planning instruction and designing learning environments for a diverse group of students, whereas differentiated instruction allows them to address and apply specific strategies to support in enhancing the skills and overcoming the difficulties. In the next sections we have discussed both UDL and DI in detail for your understanding for using these instructional approaches in the inclusive classrooms.

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## 5.7 TEACHING-LEARNING STRATEGIES OF THE INCLUSIVE CLASSROOM

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Here we have discussed some teaching-learning strategies that you can use in your inclusive classroom.

### *Co-operative Learning and Peer Tutoring*

Cooperative learning is the cornerstone of inclusive education because it can accommodate children of varied skill abilities. Each child can help to complete the necessary task that calls for his or her particular talent, skill, or learning style, while contributing to the success of the group. Over time, it is important for children to function in various roles that not only call for their natural abilities but also help them to develop additional skills. Cooperative learning is advantageous for all culturally diverse children. The cooperative learning strategies make learning more acceptable and less threatening for many children. A mixture of different abilities, ethnic backgrounds, learning styles, and personal interest's works best resulting in productive teams.

Classes are great places to implement “peer buddies” or “peer tutoring”. Children can be paired by matching their physical, cognitive and social needs. You may pair a child who is very active with someone who is less active. Some guiding principles for you to use peer tutoring are:

- You need to clearly establish the goal (what exact activity the pair would do);
- Use a peer as tutor that you think has mastery of the concept or skill to be taught;
- You must talk to the tutors about the kinds of questioning, prompts, feedback, or any special adaptations a child (classmate) might need;
- Last but not the least, you must monitor the progress systematically;
- Please remember that you may come across occasions where the peer who is being taught can have certain abilities in him/her that can be learning for other students in class. Spot the talent and use the special skills of the child with special need to reach to others. Here he/she can become

the tutor and is not always a peer learner. For example, a child with vision impairment can be excellent in music/verbal presentation skills or a child with hearing impairment/specific learning disability can be an remarkable artist in drawing and painting

**Project Based Learning Approach**

Project based learning (PBL) as a pedagogy is a great vehicle for meaningful inclusion because each of its project design elements and teaching practices are geared towards creating the kind of engagement and dynamic learning environments that are also known to best serve students with a wide range of disabilities (Uliasz, 2016). You need to integrate UDL and DI as well as IEP goals with PBL. In PBL, either you or your students devise projects that support content in a way that will help students go deeper or further. For example: making a model of an insect and labeling it or creating a play on some historical event. You need to reinforce content retention and there are lots of multi-sensory instructions involved in PBL. Use rubrics that you have read in Unit 8 of Block II, Course: BES 127 to assess student’s learning.

**Problem Based Approach**

It is a student-centered pedagogy in which students learn about a subject through the experience of solving an open ended problem. In PBA, learning experiences are organized in small group situations focusing on a given issue/problem. Each student takes on a role within the group that may be formal or informal and their roles often rotate. It is focused on the student’s reflection and reasoning to construct their own learning. The processes involved are: brainstorming, structuring and hypothesizing, learning objectives, independent study and synthesis. In short, it is identifying what they already know, what they need to know and how and where to access new information that may lead to the resolution of the problem. The role of the teacher is to facilitate the learning by supporting, guiding and monitoring the learning process.

**Explicit Instruction**

It is a systematic, direct way of engaging and is success oriented. It has been shown to promote achievement for all students. The instruction focuses on critical contents by analyzing the skills, strategies, vocabulary, concepts that students would develop and then lessons are sequentially and logically arranged for effective teaching- learning process. Frequent responses of students are elicited and student performance is carefully monitored. Immediate affirmative and corrective feedback is provided.

You as a teacher can search for more strategies which could be beneficial for teaching in an inclusive classroom.

**Check Your Progress III**

**Notes :** a) Write your answers in the space given below.  
b) Compare your answers with those given at the end of the unit.

3) Write any three benefits of peer tutoring strategies while teaching in an inclusive classroom.

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## 5.8 UNIVERSAL DESIGN FOR LEARNING (UDL)

In an inclusive classroom, no single method can reach all learners; hence there is the need of having multiple pathways to achieve the goals of instruction. Universal Design is not just a technique for special education; rather it is a technique to enhance the learning of all students. UDL was inspired by work in architecture on the planning of buildings with a view to enhance accessibility for people with physical disabilities. The added improvement in the building facilitates access for all users and not just people with physical disabilities. A ramp, for instance, is helpful to a person using a wheelchair gain easier access to a building, but it also makes it easier for a patient, a small child or an old person.

With strong evidences from research, it has been clear that the assistance targeted at a specific group can help everyone. This has found its way into the field of education. Teachers are yet to realize that, teaching strategies and pedagogical materials and tools that respond to the special needs of a specific student or group of students are also useful for all students. For example, various types of assistive technology, such as speech-to-text software, organizational software, and interactive whiteboards, enable students who have special needs to access the curriculum. When these technologies became more widely available, teachers discovered that they could enhance learning for all students in the classroom. The discovery has transformed the way in which such technologies are being used in the classroom today.

### Success Story of Nirmala

Nirmala Yadav teaches Science in a Primary School and she was planning to take a lesson on 'Farmers' Friend-Earthworm'. Madhav and Arshi are two children in her class who have hearing impairment. She was finding it very difficult to explain the lesson to them. Initially, she planned carrying the earthworms from the field with her to the class. Just by seeing the earthworms, children cannot understand how earthworms dig the soil to make it good for the plant. But she thought of some alternatives that she could do. She decided to make a small movie with the help of her mobile phone. Nirmala finally did and presented the same over a computer along with her lesson. To her surprise, it was not only Madhav and Arshi who were benefitted; the whole class had the best learning attitude. Just think how Nirmala used 'multimedia' to make her lesson inclusive. She thought it was small effort; but it was a great achievement.

**Note:** *Actual names are changed for anonymity.*

The aim of UDL, then, is to provide access to the curriculum for all students, and to assist educators in designing products and environment, making them accessible to everyone, regardless of age, skills, or situations.

UDL encourages the teacher to develop a class profile. That would help her to plan from the beginning. She needs to provide means and teaching- learning materials (TLMs) that are based on the strengths and the needs of all students. Remember that the instructional design is not only for those who have special needs. The core concepts of UDL can be summarized as follows:



**Universality and equity:** UDL is intended to ensure that teaching is designed in such a manner that it is based on the strengths of all students and meet their needs. The “universal” in UDL does not imply that there is one optimal solution for everyone; rather, it reflects awareness of the unique nature of each learner and the need to accommodate differences, creating learning experiences that suit individual learners and maximize their ability to progress (Rose & Meyer, 2002). This means planning learning opportunities that will extend the learning of all students, whatever their level of achievement, and help each one reach his or her potential.

**Flexibility and inclusiveness:** The planning of teaching and the time teachers allocate to students’ activities must be sufficiently flexible to provide real learning experiences for all students, regardless of their performance levels. Students are accommodated through:

- Different teaching strategies and TLMs that are relevant, engaging, and responsive to their learning needs; that make use of all the senses; and that vary in form, level of difficulty, and manner of presentation;
- Various technological media (multimedia) and tools;
- Different types of assessment strategies, involving a range of media, formats, and response options (Note: During assessments, students have access to the same supports that they have during instruction unless those supports undermine the purpose of the assessment.);
- Various ways of using space.

**Appropriately designed space:** A learning environment should ensure that, for example:

- All students have a clear line of sight;
- All learning materials, including print, electronic, and interactive texts, are within comfortable reach of all students;
- There is adequate space for assistive devices or teacher’s assistants.

**Simplicity:** Teachers can avoid unnecessary complexity and minimize distracting information by:

- Communicating consistent and achievable expectations;
- Collaborating with students to construct learning goals, using clear, student-friendly language;
- Arranging information sequentially to clarify its relative importance;
- Breaking instructions down into small steps;
- Providing descriptive feedback during the learning.

**Safety:** Safety is a precondition for learning. Classrooms must be safe for all and of all students and promotes student achievement and well-being, allowing every student emotionally. They must provide a caring and safe environment that is engaging, inclusive, and respectful to learn to the best of his or her ability.

### Check Your Progress IV

- Notes :**
- a) Write your answers in the space given below.
  - b) Compare your answers with those given at the end of the unit.
- 4) Examine whether the statement is 'TRUE' or 'FALSE'. UDL takes the many components of teaching into account:
- a) Overall and specific expectations and learning goals
  - b) Teaching strategies and learning situations
  - c) Pedagogical materials (teaching learning materials)
  - d) Technological tools
  - e) A variety of student products resulting from learning situations
  - f) Assessment and evaluation

### *Main Principles of UDL Applied while Planning Lesson and Instruction*

We have now understood that application of UDL needs a positive environment in the classroom. Before applying the main principles of UDL to lesson plans and instruction, we must ensure that the overall design of providing learning experiences to the students, use of space and presentation of information are in order. Besides, it is important to take care of equity and accessibility for all students; flexibility and inclusiveness; simplicity and safety. Once it is ensured that these prerequisites are in order, we can use the following principles of UDL as given in Table 5.3.

**Table 5.3: Application of UDL**

Principles	How do I apply?
Multiple Means of Representation	need to provide for multiple means of representation, to accommodate students' different strengths in perception, language, and comprehension (e.g., providing alternatives for auditory and visual information; clarifying vocabulary and symbols; using multiple media; highlighting patterns and big ideas and guiding information processing.)
Multiple Means for Action and Expression	need to provide for multiple means for action and expression, to accommodate different physical, communication, and executive-function strengths (e.g., improving access to tools or assistive devices; varying ways in which students can respond; supporting students in goal setting, planning, and time management).
Multiple Means for Engagement	need to provide for multiple means for engagement, to accommodate different interests, attention spans, and strengths in self-regulation (e.g., allowing for individual choice, increasing relevance and authenticity, minimizing distractions, providing graduated levels of challenge, fostering collaboration)

The following points must guide teachers in the classroom while applying UDL principles:

- Use a variety of teaching and learning materials that represent all modalities (i.e., that make use of all the senses, that employ different media, and so on).
- Use multiple means of presentation, at various levels of difficulty, as appropriate for the students in the class (e.g., present information using visual, auditory, and kinesthetic formats during instruction). Make varied use of space.
- Ensure access to various types of information and communication technology tools to facilitate learning.
- Ensure adequate space and a minimum of distractions, so that students can concentrate on instructional elements.
- Ensure that the classroom is a caring and safe learning environment.

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## 5.9 DIFFERENTIATED INSTRUCTION (DI)

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DI is an approach to teaching that is intended to meet the learning needs of children with diverse abilities. This helps you to plan and deliver your instruction based on different strengths and weakness of the children in your classroom. As discussed earlier about UDL, the instruction is varied so that children can take information in various ways, use different approaches to understand key aspects of the information and express or demonstrate what they have learned according to their personal skills and abilities. It is important for you to plan the essential components or the most powerful ideas of the content to deliver as children will learn material in different breadths and depths. To accomplish the desired outcomes, DI uses flexible grouping patterns; sometimes whole class instruction occurs, and sometimes children work in small groups. Some important steps of DI are given here:

- **Know your student's strengths and plan to teach by using them:** For example, some children may enjoy playing sports and others may like singing or acting. You can often use these strengths to find out an approach to instruction that will be most appealing to them.
- **Vary the instructional content based on children's strengths, performance level, and need:** The idea is not to change the essential aspects of the content but to offer in different ways or degrees based on current performance of the children.
- **Change the instructional approach, lessons, and grouping based on children's characteristics and need for support:** Different learners need varying amount and types of support; so plan your lessons from simple to advanced levels and group children (initially for whole group and then breaking into different small groups) for different types of instructions to be delivered.
- **Consider various ways for children to demonstrate what they have learned:** For some, use alternative ways of assessment (may be oral test for a particular child) to determine their mastery of content knowledge and

how well the child has acquired the desired contents through summative assessment. However do not forget to use formative assessment to monitor children’s learning.

DI includes	DI does not include
<ul style="list-style-type: none"> <li>• Providing alternative instructional and assessment activities;</li> <li>• Challenging students at an appropriate level;</li> <li>• Using a variety of groupings to meet student needs.</li> </ul>	<ul style="list-style-type: none"> <li>• Doing something different for every student in the class;</li> <li>• Disorderly or undisciplined student activity;</li> <li>• Using groups that never change, or isolating struggling students within the class;</li> <li>• All students participating in the same endeavour.</li> </ul>

A key strategy in differentiated instruction is the use of flexible groupings, which allows teachers to assign different tasks to different students, individually or in small groups, based on strengths, interests, learning styles, or readiness. Students may be grouped by interest, but may also have activities set at different levels of complexity (questioning levels, abstract thinking processes) resulting in varying products that employ students’ preferred learning modality (auditory, visual, or kinesthetic). It is important to note, however, that the approach does not exclude instruction and activities in which all students are working on the same learning task at the same time, whether individually, in groups, or as a class.

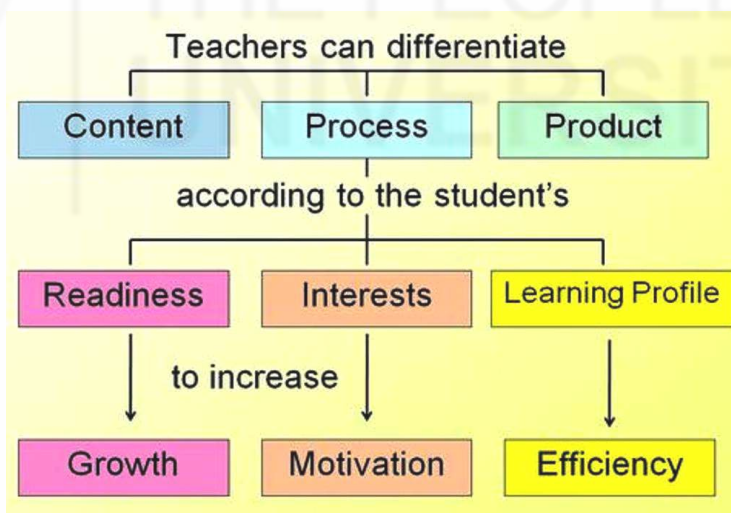


Figure 5.1 Differentiated Instruction

Source: <https://www.tes.com/lessons/lrDIRIZiTH8JWg/differentiated-instruction>

**Main Principles of DI Applied while Planning Lesson and Instruction**

Before applying the main principles of DI to lesson plans and instruction, we must ensure that assessment and instructions are varied to (a) suit diverse learning styles and preferences; (b) engage students with diverse interests; (c) support

students who are at different stages in their readiness to learn and provide scaffolding, emotional support, and opportunity for practice.

Then we can use the following principles of DI as given in Table 5.4.

**Table 5.4: Main Principles of DI**

Principles	How do I apply?
Differentiate Content	<ul style="list-style-type: none"> <li>• Vary content (e.g., provide content at different levels of difficulty; enable students to extend knowledge and skills) to suit student readiness, interests, motivational needs, and learning styles.</li> <li>• Unpack the big ideas of the curriculum to create achievable learning goals.</li> <li>• Introduce new learning and pose open questions as appropriate to the student’s zone of proximal development (ZPD).</li> </ul>
Differentiate Process	<ul style="list-style-type: none"> <li>• Use various assessment strategies to match students’ strengths, learning style preferences, interests, and readiness.</li> <li>• Use various types of learning activities and various grouping strategies to draw on students’ strengths and provide support in areas that need improvement.</li> <li>• Use a variety of instructional and management strategies that engage all modalities.</li> <li>• Provide students with opportunities to choose from an array of activities and projects that involve differentiated processes.</li> <li>• Monitor students’ response to the differentiated strategies used, and assess their progress on a regular basis.</li> <li>• Provide the accommodations and/or modifications that are specified in the IEPs of students who have special needs.</li> </ul>
Differentiate Product	<ul style="list-style-type: none"> <li>• Gather achievement data through various assessment tools.</li> <li>• Engage students’ interest by involving them in various different types of projects and problem-solving activities.</li> <li>• Foster students’ awareness of their strengths in learning, and their sense of ownership of their learning, by allowing them to choose the products they will create and the formats or modes of presentation they will use.</li> </ul>

## 5.10 COMMON CLASSROOM STRATEGIES THAT SUPPORT BOTH UDL AND DI

Now you might have understood that UDL and DI overlap, share a number of goals and strategies, such as the following:

- Taking into account the background and experiences of all students to meet their diverse interests, aptitudes, and learning needs;
- Varying the form of assessment and instructional materials (e.g., printed text, visual or auditory representations);
- Using various types of media;
- Providing opportunities for different kinds of activities and different means of demonstrating learning;
- Providing a safe and supportive environment that enhances students' ability to learn.

Now you must have thought of instructional strategies in their classrooms that support some of the shared principles of UDL and DI, including *cooperative learning*, *project-based approaches*, *problem-based approaches*, and *explicit instruction*. The Table 5.5 summarizes relevant aspects of these strategies.

**Table 5.5: Common Classroom Strategies Supporting UDL and DI**

Principles	How do I apply?
Cooperative learning	<ul style="list-style-type: none"> <li>• Emphasizes small-group work, which suits the emotional needs and learning styles of some students.</li> <li>• Groups are composed of students with different abilities and talents, enabling participants to experience the value of their particular strengths.</li> <li>• Students work together to achieve specific tasks, which fosters positive interdependence and responsibility.</li> <li>• Tasks are structured so that no single team member can complete them on his or her own, which fosters an appreciation of diverse strengths and teamwork.</li> </ul>
Project-based approach	<ul style="list-style-type: none"> <li>• Facilitates learning through a variety of different projects focused on a particular topic or theme, allowing students to work on topics of particular interest to them, at their own level and pace.</li> <li>• Students may work independently or in mixed-ability groups, as suits their particular learning style or emotional need.</li> </ul>

	<ul style="list-style-type: none"> <li>• For group projects, the teacher ensures that students can work simultaneously on a number of different options.</li> <li>• The teacher monitors carefully to ensure that students are attempting tasks at the most appropriate instructional level.</li> </ul>
Problem-based approach	<ul style="list-style-type: none"> <li>• Allows students to solve realistic problems by reflecting on best strategies and drawing on prior knowledge of effective approaches used in other problem situations, according to their particular prior knowledge and readiness to learn.</li> <li>• Requires careful planning by teacher to provide appropriate cognitive challenges for every student.</li> </ul>
Explicit instruction	<ul style="list-style-type: none"> <li>• Provides suitable learning opportunities for students who benefit most from structured learning, clear direction, and specified processes. Provides structure for students who need more guidance.</li> <li>• Requires teacher to frequently model the use of learning strategies and assessment tools by: <ul style="list-style-type: none"> <li>– verbalizing thought processes, including steps of a learning strategy or process;</li> <li>– providing opportunities for students to practice using the strategy;</li> <li>– mentoring and monitoring students’ practices;</li> <li>– providing timely feedback;</li> <li>– guiding students’ attempts until they can carry out the strategy independently.</li> </ul> </li> </ul>

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## 5.11 CONTINUOUS COMPREHENSIVE EVALUATION (CCE) IN INCLUSIVE CLASSROOM

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You must be familiar with CCE. It refers to a system of school based evaluation of students that cover all aspects of development. As the term suggests, it is a continuous process built into total teaching-learning process rather than an event. It means regular assessment, frequent unit testing, diagnosis of learning gaps, and use of corrective measures, retesting and feedback of evidence to teachers and students for their self evaluation. In inclusive classroom, you need to follow the CCE procedure, but it is important to remember that evaluating the achievement of a child with special needs is not an easy task. Inappropriate

evaluation can lead to lowering of the child's confidence and stop their efforts to achieve which may be very challenging according to their special needs. The following points you must keep in your mind while undertaking CCE:

- **Decide if flexibility in grading is necessary:** By knowing the child's problem, be flexible while grading. For example, you may not reduce the grade if a hearing impaired child has a number of mistakes in spelling and sentence structure.
- **Decide on the purpose of grading:** Grading helps children to improve their performance and teacher to focus on instruction. You need to grade only when it helps the child to improve.
- **Determine the grading adaptation to be used:** Adaptation may vary according to the Personalized Grading Plan (PGP), but most common adaptations on grading can be (a) the child's grading is done as per progress on IEP objectives; (b) improvements over time; (c) correct procedure used despite an incomplete assignment; (d) high level of effort made by the child but could not complete the test; (e) alternative grading based on assignments/ participation in the classroom at the place of examination.

You as a teacher must ensure that the child has understood the test material and necessary adaptations (wherever applicable) are available for taking the test. Allow more time or change the format so that the child would respond in the best way or you may need to change the test environment where the child would be more comfortable with the test (the furniture, lighting, enough space for working fewer distractions etc.).

In case of term end or final examinations of 10<sup>th</sup> and 12<sup>th</sup> class, various examination boards and councils also provide exemptions and concessions to the students with special needs. For illustration purpose, the Circular of Central Board of Secondary Education of 24 January 2017 is given at the end of this Unit (Annexure 1).

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## 5.12 REPORTING AND FEEDBACK

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Effective progress monitoring, regular reporting of progress and a good feedback mechanism are keys to success for students in the inclusive classroom. Progress can be monitored in four general categories: (1) Curriculum-Based Measurement; (2) Classroom assessments (system or teacher-developed); (3) Adaptive assessments; and (4) Large-scale assessments used during the year to monitor growth of individual students and groups of students. For reporting and feedback, you need to consider the following points:

- Use multiple measures for progress monitoring.
- The entire school needs to build skills and knowledge on how progress monitoring is used in inclusive classroom for improvement and follow the same.
- Find and use available resources for effective reporting and platforms for sharing feedback.
- Apply universal design for learning principles to the design of progress monitoring techniques to ensure that individual learner differences are considered from the start.



- Be prepared to have an open discussion of whether the benefit of a comprehensive progress monitoring improvement process is sufficiently large to offset the additional time or cost required for implementation.

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## 5.13 LET US SUM UP

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The teacher has a great role to play in creating a positive environment in the school. The inclusive classroom requires teaching-learning strategies that suit all students in the class including children with special needs. Before involving in the teaching-learning process, the teacher must identify instructional needs and wherever required, prepare an IEP. She should be aware of various inclusive classroom teaching –learning strategies such as cooperative learning, peer tutoring, project based learning, problem based approach, explicit instruction, etc. He/she should apply the concept of UDL in her class to design instructional methods, materials, activities and evaluation procedures in an effort to support children with wide differences in their abilities. Differentiated instruction is applied to vary the instructional content based on children’s strength, performance level and needs. Changes are made in instructional approach, lessons and grouping based on children’s characteristics and need for support. Adaptations and accommodations in teaching must be considered seriously while undertaking CCE, measuring progress and providing feedback.

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## 5.14 ANSWERS TO CHECK YOUR PROGRESS

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- 5.1 Do yourself
- 5.2 a. True, b. False, c. True, d. True
- 5.3 Do yourself
- 5.4 a to f – all true

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## 5.15 REFERENCES AND RESOURCES

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1. **CAST (2011)**. Universal Design for Learning Guidelines version 2.0. Wakefield, MA: Author. **CAST. (2015)**. About Universal Design for Learning. Retrieved from <http://www.cast.org/our-work/about-udl.html#.V88Bc-krKUK>
2. **Tomlinson, C. (2001)**. How to differentiate instruction in mixed ability classroom (2<sup>nd</sup> ed), Alexandria, VA: Association for Supervision and Curriculum Development
3. **Uliasz, K. (2016)**. Inclusive special education via PBL. Retrieved from [www.bie.org/blog/inclusive\\_special\\_education\\_via\\_pbl/](http://www.bie.org/blog/inclusive_special_education_via_pbl/) retrieved on 15 March 2017.

### *Web Resources*

**ASCD- Learn, Teach & Lead:** Online/multimedia resources available on differentiated instruction, visit: [www.ascd.org/research-a-topic/differentiated-instruction-multimedia.aspx#online](http://www.ascd.org/research-a-topic/differentiated-instruction-multimedia.aspx#online)

**CAST- Universal Design for Learning (UDL):** A comprehensive website of information and resources regarding UDL, visit: [www.cast.org/udl/index.html](http://www.cast.org/udl/index.html)

**Making everyone In (Video):** An overview of all videos developed for Inclusive Learning: Everyone's In, highlighting the indicators of success in eight schools across Edmonton Public Schools. Visit: <http://www.youtube.com/watch?v=aTXtT05782Y>

**MyEducationLab:** Go to topics on teaching in inclusive classroom, visit [www.myeducationlab.com](http://www.myeducationlab.com)

**The Inclusive Class:** Ten items that can make your classroom more inclusive, visit [www.theinclusiveclass.com](http://www.theinclusiveclass.com)

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**Annexure-I**

**Instructions/Exemptions/concessions extended by the Board during Secondary (Class X)& Senior School Certificate(Class XII) Examinations for Differently Abled Candidates**

**A. GENERAL INSTRUCTIONS/CONCESSIONS(APPLICABLE FOR CLASS X & XII)**

Sl.No.	Subject	Instructions/ Concessions
1.	Medical Certificate	<p>The medical certificate issued by the following agencies/organizations will be considered for granting concessions to Differently abled candidates:</p> <ul style="list-style-type: none"> <li>i) Disability Certificate(s) issued by Government hospitals controlled by either the Central or State Governments;</li> <li>ii) Disability Certificate(s) issued by Recognized institutes of national level viz National Association for the Blind, Spastic Society of India etc; and</li> <li>iii) Disability Certificate(s) issued by Non-governmental Organizations/practitioners registered with Rehabilitation Council of India/Central Government/State Government of the Respective State.</li> </ul>
2.	Scribe and compensatory time	<ul style="list-style-type: none"> <li>i) Spastic, Visually Impaired, Physically Handicapped, Dyslexic, Autistic and candidates with disabilities as defined in THE RIGHTS OF PERSONS WITH DISABILITIES ACT 2016 are permitted to use a Scribe or allowed Compensatory time as given below or both : <ul style="list-style-type: none"> <li>For paper of 3 hours duration      60 minutes</li> <li>For paper of 2½ hours duration    50 minutes</li> <li>For paper of 2 hours duration      40 minutes</li> <li>For paper of 1½ hours duration 30 minutes</li> </ul> </li> <li>ii) Autistic candidate is permitted to use the services of a scribe or an Adult prompter.</li> </ul>
3.	Appointment of Scribe and related instructions	<ul style="list-style-type: none"> <li>i) A person to be appointed as scribe should not have obtained his/her qualifications in the same subject (s) in which the candidate shall be appearing for the examination</li> <li>ii) candidate shall have the discretion of opting for his own scribe and shall have the flexibility in accommodating change in scribe in case of emergency.</li> <li>iii) Candidate shall also have the option of meeting the scribe a day before the examination.</li> <li>iv) Centre Superintendent of the examination centre concerned shall forward to the concerned Regional Officer of the Board, a report giving full particulars of</li> </ul>

		<p>the candidate and of the scribe.</p> <p>v) Suitable room shall be arranged for the candidate for whom a scribe is allowed and a separate Assistant Superintendent shall be appointed by the Centre Superintendent to supervise his/her examination.</p> <p>vi) Services of Scribe shall be provided free of cost</p> <p>vii) The Scribe shall be paid by the Board remuneration as prescribed from time to time.</p>
4.	Other General instructions/ facilities	<p>i) To facilitate easy access, a few selected schools are made examination centers for special students.</p> <p>ii) Teachers from schools for visually impaired are appointed as Assistant Superintendent(s) (Invigilators) at the special examination centers. However, precaution is taken to appoint different subject teachers on different days.</p> <p>iii) Answer books of differently abled candidates are sent separately by the Centre Superintendents</p> <p>iv) A separate column is provided on the title page of the answer book for indicating the category of differently abled candidates.</p> <p>v) Visually Impaired candidates are permitted use of screen reading software (like JAWS- Job Access with Speech) with prior approval of the Board. They also have the facility of using a computer or a typewriter for writing answers.</p> <p>vi) Use of calculator is not permitted in any of the examinations conducted by the Board</p>
5.	CGPA Calculation	CGPA in respect Candidates with disabilities as defined in THE RIGHTS OF PERSONS WITH DISABILITIES ACT 2016 be calculated out of 5 subjects only, even if offering a NSQF subject under Compulsory group.
6.	Fee	Registration and Examination fee (IX, X, XI, XII) will not be charged from Visually Impaired students.

## B. SPECIFIC EXEMPTIONS/CONCESSIONS

### I. CLASS X

S. No.	Subject	Exemptions/Concessions
1.	Exemption from third language	<p>Exemption from examination in the third language from Classes VI to VIII is granted to</p> <ul style="list-style-type: none"> <li>• Visually impaired candidates</li> <li>• Candidates suffering from speech / hearing defects</li> <li>• Dyslexic candidates</li> <li>• Candidates with disabilities as defined in THE RIGHTS OF PERSONS WITH DISABILITIES ACT 2016.</li> </ul>
2.	Flexibility in choosing subjects	<p>i) "Candidates with visual and hearing impairment, Spastic, Dyslexic, Autistic and candidates with disabilities as defined in THE RIGHTS OF PERSONS WITH DISABILITIES ACT 2016 have the option of</p>

		<p>studying one compulsory language as against two. This language should be in consonance with the overall spirit of the Three Language Formula prescribed by the Board. Besides one language any four of the following subjects be offered”.</p> <p><i>Mathematics, Science, Social Science, another language, Music, Painting, Home Science, Foundation of Information Technology, Commerce(Elements of Business), Commerce(Elements of Book Keeping and Accountancy),E-Publishing and E-Office(English),E-Publishing and E-Office(Hindi), Information and Communication Technology(ICT-166), any one out of Retail (NSQF) and Information Technology (NSQF)</i></p> <p>ii) Bonafide residents of Delhi appearing as Private candidate as per provisions of Examination Byelaws cannot take subjects having Practical Component at Secondary level. However, candidates with disabilities as defined in the Examination Bye-laws have the option of taking up Music, Painting, Home Science as the subjects of study.</p> <p>iii) Physio-therapeutic exercises are considered as equivalent to Physical and Health Education course of the Board.</p>
3.	Alternate questions/Separate Question Paper	<p>i) Alternative type questions are provided in lieu of questions having visual inputs for Visually Impaired candidates in the subjects of English Communicative and Social Science.</p> <p>ii) Separate question papers in enlarged print are provided in the subjects of Mathematics and Science.</p>

## II. CLASS XII

S.No.	Subject	Exemptions/Concessions
1.	Flexibility in Choosing subjects.	Bonafide residents of Delhi appearing as Private candidate as per provisions of Examination Byelaws cannot take subjects having Practical Component. However, candidates with disabilities as defined in the Examination Bye-laws have the option of taking Music, Painting, Home Science as the subjects of study.
2.	Separate question paper and questions in lieu of practical component	<p>Visually Impaired candidates are -</p> <p>i) given separate question papers containing Multiple choice questions based on Practical component in lieu of practicals in the subjects of Physics, Chemistry and Biology</p> <p>ii) Question papers administered in the subjects of Physics, Chemistry, Mathematics and Biology are without any visual input</p> <p>iii) Alternative type questions are provided in lieu of questions having visual inputs in the subjects of History, Geography and Economics</p>

Students studying in schools affiliated to the Board and desirous of availing the exemptions/concessions should approach the concerned Regional Office of CBSE through the Head of their Institution preferably while in Class IX and/or XI. The request should be supported by relevant medical certificate and recommendation from the Head of the School/Institution. Only those students would be considered for grant of exemption/concession in whose respect relevant category has been entered during registration in Class IX and/or XI.

**C. Advisory to schools as per the Guidelines of Inclusive Education of Children with Disabilities (IECD):**

- a. to ensure that no child with special needs is denied admission in Mainstream Education
- b. to monitor enrolment of disabled children in schools
- c. Schools to provide support through assistive devices and the availability of trained teachers
- d. to modify the existing physical infrastructure and teaching methodologies to meet the needs of all children including Children with Special Needs
- e. to ensure that they are made disabled friendly by 2020 and all educational institutions including hostels, libraries, laboratories and buildings have barrier free access for the disabled
- f. to ensure availability of Study material for the disabled and Talking Text Books, Reading Machines and computers with speech software
- g. to ensure adequate number of sign language interpreters, transcription services and a loop induction system for the hearing handicapped students
- h. to revisit classroom organization required for the education of Children with Special Needs
- i. to ensure regular in-service training of teachers in inclusive education at the elementary and secondary level.

CBSE has 10 Regional Offices which deal with matters of different states. Contact number, jurisdiction and address of Regional Offices is available on the website of CBSE. CBSE has also a Helpline 1800-11-8002 which is functional on all working days from 9 AM - 7PM.