Unit - 4 ❑ Inclusive Academic Instructions

Structure

4.1 Introduction

According to Loreman and Deepeler, (2001), Inclusion means full inclusion of children with diverse abilities in all aspects of schooling that other children are able to access and enjoy. It involves regular schools and classrooms genuinely adapting and changing to meet the needs of all children, as well as celebrating and valuing differences. This definition of inclusion does not imply that children with diverse abilities will not receive specialized assistance or teaching outside of the classroom when required, but rather that this is just one of many options that are available to, and in fact required of, all children.

The history of education for persons with disabilities is a progression from segregation to integration and now to inclusion. Inclusion refers to the opportunity for persons with a disability to participate fully in all of the educational employment, consumer, recreational, community and domestic activities that typify every society (ILSMH 1994)

Inclusive education is concerned with removing all barriers to learning, and with the participation of all learners vulnerable to exclusion and marginalization. It is a strategic approach designed to facilitate learning success for all children. It addresses the common goals of decreasing and overcoming all exclusion from the human right to education, at least at the elementary level and enhancing access, participation and learning success in quality basic education for all 2000 Bulletin, UNESCO NO.32, 1998.

An ideal inclusive education concept aims at facilitating total integration of the child in the community. The upcoming inclusive education programs in India are avoiding separation of children with disabilities from their families for the purpose of education.

In India many schools are implementing the inclusive education, which also aims towards universalization of primary education of both disabled and non-disabled students.

Inclusion requires a climate of acceptance. As stated earlier, the ideal inclusive education in India would be possible only when all general education teachers are capable of serving students with special needs. In addressing the challenges of educating these children, the schools become effective schools and the teachers become effective teachers. Attitude is the basic and pervasive aspects for determining the effectiveness of inclusive education. All the research evidence point towards a considerable potential for a greater amount of cooperative work between teachers and students.

4.2 Objectives

After going through this unit you will be able to

- define universal design for learning and its implication in inclusive set up.
- explain the different co-teaching methods along with its advantages and disadvantages.
- discuss about differentiated instruction.
- state about peer mediated instructions and its types.
- explain the importance of ICT for instruction.

4.3 Universal design for learning : Multiple Means of Access, Expression, Engagement & Assessment

4.3.1 Meaning and Definition of Universal Design for learning

Universal Design for Learning is a much-touted approach to providing appropriate and accessible education to all students, including those with disabilities, in the context of the demands of the 21st Century educational environment. UDL provides a blueprint (framework) for creating flexible goals, methods, materials, and assessments that accommodate learner differences (Cast, 2002).

Universal design for learning is an approach to ensure that educational programs serve all students.

UDL definition

"the proactive design of curricula (including learning goals, instructional methods and materials, and assessments) that are accessible and usable by all students with

little or no need for additional accommodations and are compatible with available assistive technology" in Forum, June 2008

4.3.2 Universal Design in Education

The goal of education in the 21st century is not simply the mastery of content knowledge or use of new technologies. It is the mastery of the learning process. Education should help turn novice learners into expert learners—individuals who want to learn, who know how to learn strategically, and who, in their own highly individual and flexible ways, are well prepared for a lifetime of learning. Universal Design for Learning (UDL) helps educators meet this goal by providing a framework for understanding how to create curricula that meets the needs of all learners from the start.

4.3.3 Features of Universal Design for Learning

- UDL assumes a continuum of learning differences in the classroom.
- UDL relies on curriculum being presented in a flexible, engaging and challenging manner.

- UDL maintains high expectations for all students.
- UDL design for those in the margins, works better for everyone
- UDL is inclusive by design.

Inclusive Education

"The new challenge of inclusion is to create schools in which our day-to-day efforts no longer assume that a particular text, activity, or teaching mode will "work" to support any particular students' learninsg"

Ferguson, 1995

Universal Design for Learning

- **Is what?**

  A scientifically valid framework that

- **Does what?**

  Provides multiple means of access, assessment, and engagement and removes barriers in instruction

- **For what?**

  To achieve academic and behavioral success for all

4.3.4 Principle of Universal Design for Learning

Universal Design for Learning calls for

- Multiple means of access or representation, to give learners various ways of acquiring information and knowledge.
- Multiple means of action and expression, to provide learners alternatives for demonstrating what they know,
- Multiple means of engagement and assessment, to tap into learners' interests, offer appropriate challenges, and increase motivation.

Principle I: Provide Multiple Means of Representation (the "what" of learning)

Learners differ in the ways that they perceive and comprehend information that is presented to them. For example, those with sensory disabilities (e.g., blindness or deafness); learning disabilities (e.g., dyslexia); language or cultural differences, and so forth may all require different ways of approaching content. Others may simply grasp information quicker or more efficiently through visual or auditory means rather than printed text. Learning, and transfer of learning, occurs when multiple representations are used, because it allows students to make connections within, as well as between, concepts. In short, there is not one means of representation that will be optimal for all learners; providing options for representation is essential.

Principle II: Provide Multiple Means of Action and Expression (the "how" of learning)

Learners differ in the ways that they can navigate a learning environment and express what they know. For example, individuals with significant movement impairments (e.g., cerebral palsy), those who struggle with strategic and organizational abilities (executive function disorders), those who have language barriers, and so forth approach learning tasks very differently. Some may be able to express themselves well in written text but not speech, and vice versa. It should also be recognized that action and expression require a great deal of strategy, practice, and organization, and this is another area in which learners can differ. In reality, there is not one means of action and expression that will be optimal for all learners; providing options for action and expression is essential.

Principle III: Provide Multiple Means of Engagement / Assessmen (the "why" of learning)

Affect represents a crucial element to learning, and learners differ markedly in the ways in which they can be engaged or motivated to learn. There are a variety of sources that can influence individual variation in affect including neurology, culture, personal relevance, subjectivity, and background knowledge, along with a variety of other factors. Some learners are highly engaged by spontaneity and novelty while other are disengaged, even frightened, by those aspects, preferring strict routine. Some learners might like to work alone, while others prefer to work with their peers. In reality, there is

not one means of engagement that will be optimal for all learners in all contexts; providing multiple options for engagement is essential.

In UDL we are seeking to create expert learners, individuals who- whatever the particular strengths and weaknesses, know themselves, and know how to learn.

4.4 Co-Teaching Methods : One Teach One Assist, Station-Teaching, Parallel Teaching, Alternate Teaching & Team Teaching

4.4.1 Meaning of Co-Teaching

When a general education teacher and a special education teacher work together to plan and deliver instruction to a diverse population in a general education setting. It involves the distribution of responsibility among people for planning, instruction, and evaluation for a classroom of students. Another way of saying this is that co-teaching is a fun way for students to learn from two or more people who may have different ways of thinking or teaching. Some people say that co-teaching is a creative way to connect with and support others to help all children learn. Others say that co-teaching is a way to make schools more effective. A common example of co-teaching today is played out in many inclusive classrooms where a General Education teacher and a Special Education teacher share responsibility for classroom management and instruction.

Co-teaching may be defined as two or more people who agree to

1. Coordinate their work to achieve at least one common, publicly agreed-on goal.
2. Share a belief system that each of the co-teaching team members has unique and needed expertise.
3. Demonstrate parity by alternatively engaging in the dual roles of teacher and learner, expert and novice, giver and recipient of knowledge or skills.
4. Use a distributed functions theory of leadership in which the task and relationship functions of the traditional lone teacher are distributed among all co-teaching group members.
5. Use a cooperative process that includes face-to-face interaction, positive interdependence, performance, as well as monitoring and processing of interpersonal skills, and individual accountability.

4.4.2 Benefits of Co-Teaching

The benefits of co-teaching for Teachers are:

- It is easier to monitor students' behavior
- It builds relationships and opportunities for professional and/or personal growth
- It provides more support during instructional activities
- It gives support to provide students' accommodations
- It helps to receive feedback from each other
- It provides more flexible grouping
- It covers content more effectively to support mastery learning

The benefits of Co-Teaching for Students:

- It gives access to the general education curriculum
- It provides more instructional support
- It enhances learning from peers
- It provides more opportunities for social interactions
- It increase respect and understanding for all students

4.4.3. Co-Teaching Methods

Marilyn Friend and Lynne Cook (1996a) have presented different methods of co-teaching that provide ways for two teachers to work together in a classroom. They include:

4.4.3.1 One teach One Assist

4.4.3.2 Station Teaching

4.4.3.3 Parallel Teaching

4.4.3.4 Alternative Teaching

4.4.3.5 Team teaching

4.4.3.1 One teach One Assist

With this model one teacher has the primary responsibility for planning and teaching, while the other teacher moves around the classroom helping individuals and observing particular behaviors. For example, one teacher could present the lesson while the other

walks around or one teacher presents the lesson while the other distributes materials.

Some advantages of this approach are:

- Students receive individual help in a timely manner
- It's easier to keep students on task because of the proximity of the teacher.
- It saves time when distributing materials.

Some disadvantages of this approach are:

- Through the eyes of the students, one teacher has more control than the other.
- Students often relate to one person as the teacher and the other as a teacher's aide.
- Having a teacher walk around during the lesson may be distracting to some students.

4.4.3.2 Station Teaching

Both teachers divide the instructional content, and each takes responsibility for

planning and teaching part of it. In station teaching, the classroom is divided into various teaching centers. Both the teachers are at particular stations; the other stations are run independently by the students or by a teacher's aide. For example, three or more science stations, each containing a different experiment, could be organized with both the teachers working with the two stations that need the most supervision. It is also possible to use an aide or parent volunteer or trainee teacher to supervise stations.

Some advantages of this approach are:

- Each teacher has a clear teaching responsibility.
- Students have the benefit of working in small groups.
- Teachers can cover more material in a shorter period of time.

Some disadvantages of this approach are:

- To work effectively, this approach requires a lot of preplanning.
- All materials must be prepared and organized in advance.
- The noise level will be at a maximum.

4.4.3.3 Parallel Teaching

In parallel teaching, both the teachers plan jointly but split the classroom in half

to teach the same information at the same time. For example, both teachers could be explaining the same math problem-solving lesson in two different parts of the room. If the room had two computers, each teacher could use a computer to model the use of the Internet or a new piece of software to half of the class. Each half of the class could be involved in a literature study group during a text study.

Some advantages of this approach are:

- Preplanning provides better teaching.
- It allows teachers to work with smaller groups.
- Each teacher has the comfort level of working separately to teach the same lesson.

Some disadvantages of this approach are:

- Both teachers need to be competent in the content so the students will learn equally.
- The pace of the lesson must be the same so they finish at the same time.
- There must be enough flexible space in the classroom to accommodate two groups.

4.4.3.4 Alternative Teaching

In alternative teaching, one teacher manages most of the class while the other teacher works with a small group inside or outside of the classroom. The small group does not have to integrate with the current lesson. For example, a teacher could take an individual student out to catch him/her up on a missed assignment. A teacher could work with an individual or a small group for assessment purposes or to teach social skills. A small group of students could work together for remedial or extended challenge work.

Some advantages of this approach are:

- Working with small groups or with individuals helps meet the personal needs of students.
- Both teachers can remain in the classroom so one teacher can informally observe the other modeling good teaching.

Some disadvantages of this approach are:

- Groups must vary with purpose and composition or the students in the group will quickly become labeled (e.g., the “smart” group).

- The students might view the teacher working with the larger group as the teacher in control.
- Noise level must be controlled if both teachers are working in the classroom.

4.4.3.5 Team Teaching

Both teachers are responsible for planning, and they share the instruction of all students. The lessons are taught by both teachers who actively engage in conversation, not lecture, to encourage discussion by students. Both teachers are actively involved in the management of the lesson and discipline. This approach can be very effective with the classroom teacher and a student teacher or two student teachers working together.

Some advantages of this approach are:

- Each teacher has an active role.
- Students view both teachers as equals.
- Both teachers are actively involved in classroom organization and management.

Some disadvantages of this approach are:

- Preplanning takes a considerable amount of time.
- Teachers' roles need to be clearly defined for shared responsibility

4.5 Differentiated Instruction : Content, Process & Product

4.5.1 Meaning of Differentiated Instruction

Differentiated instruction is an instructional theory that allows teachers to face this challenge by taking diverse student factors into account when planning and delivering instruction. Based on this theory, teachers can structure learning environments that address the variety of learning styles, interests, and abilities found within a classroom. Differentiating instruction means creating multiple paths so that students of different abilities, interest or learning needs experience equally appropriate ways to absorb, use, develop and present concepts as a part of the daily learning process. It allows students to take greater responsibility and ownership for their own learning, and provides opportunities for peer teaching and cooperative learning.

4.5.2 Four Ways to Differentiate Instruction:

Differentiation can occur in the content, process, product or environment in the classroom.

1. Differentiating the Content/Topic

Content can be described as the knowledge, skills and attitudes we want children to learn. Differentiating content requires that students are pre-tested so the teacher can identify the students who do not require direct instruction. Students demonstrating understanding of the concept can skip the instruction step and proceed to apply the concepts to the task of solving a problem. This strategy is often referred to as compacting the curriculum. Another way to differentiate content is simply to permit the apt student to accelerate their rate of progress. They can work ahead independently on some projects, i.e. they cover the content faster than their peers.

2. Differentiating the Process/Activities

Differentiating the processes means varying learning activities or strategies to provide appropriate methods for students to explore the concepts. It is important to give students alternative paths to manipulate the ideas embedded within the concept. For example students may use graphic organizers, maps, diagrams or charts to display their comprehension of concepts covered. Varying the complexity of the graphic organizer can very effectively facilitate differing levels of cognitive processing for students of differing ability.

3. Differentiating the Product

Differentiating the product means varying the complexity of the product that students create to demonstrate mastery of the concepts. Students working below grade level may have reduced performance expectations, while students above grade level may be asked to produce work that requires more complex or more advanced thinking. There are many sources of alternative product ideas available to teachers. However sometimes it is motivating for students to be offered choice of product.

4. Differentiating By Manipulating the Environment or Through Accommodating Individual Learning Styles

There has been a great deal of work on learning styles over the last 2 decades. Dunn and Dunn focused on manipulating the school environment at about the same time

as Joseph Renzulli recommended varying teaching strategies. Howard Gardner identified individual talents or aptitudes in his Multiple Intelligences theories. It has been concluded that differentiation may be done by manipulating the environment of by accommodating individual learning styles in the learning process.

4.6 Peer Mediated Instruction : Class Wide Peer Tutoring, Peer Assistged Learning Strategies

4.6.1 Meaning and Definition of Peer Mediated Instruction

Teachers in general and special education classrooms are continually faced with instructional challenges as the diversity of students in classrooms widens. Researchers and practitioners are interested in implementing best practices that improve educational outcomes for all learners. One solution to overcoming these challenges is the implementation of Peer-Mediated Instruction and Intervention (PMII). Peer-mediated instruction is a widely applied and researched educational intervention in both general and special education settings.

Peer-Mediated Instruction and Intervention is an alternative classroom arrangement in which students take an instructional role with classmates or other students. Many approaches have been developed in which students work in pairs (dyads) or small cooperative learning groups. To be most effective, students must be taught roles in the instructional episode; to be systematic, elicit responses, and provide feedback. Research supports the use of these approaches as alternative practice activities, however, does not condone the use of peers for providing instruction in "new" instructional content.

Myreddi, V, Goodlad and Hirst, 1989 described peer tutoring or peer mediated instruction as "*The system of instruction in which learners help each other and learn by teaching.*" Probably the most succinct definition of peer tutoring comes from Damon and Pheleps *"Peer tutoring is an approach in which one child instructs another child on material on which the first is an expert and the second is novice.*

4.6.2 Advantages of Peer Mediated Instruction

Peer mediated instruction has been a favoured practice in inclusive setting due to its potential advantages. Peer mediated instruction benefits children with special needs and all other children. It has the potential to deliver many of the benefits normally associated with expert tutoring by teachers. If teachers organize the contents of the

program peer tutors can provide appropriate activities tailored to meet the individual needs of children with special needs. They can ensure a high level of tutee participation in the learning process, and individual guidance and personal care can be provided.

Peer mediated instruction normally promotes healthy social relationships between students with special needs and their peer tutors. It also encourages positive interaction between regular class students and those with special needs, and allows individuals to work together in cooperative work environments. Peer mediated instruction encourages close personal relationships, personal interdependence and shared responsibility for learning outcomes.

Peer mediated instruction reduces deficiencies in children with special needs and such children are active and participate in many regular class activities.

4.6.3 Types of Peer Mediated Instruction

Ryan, Reid, and Epstein (2004), has summarized some peer tutoring formats, which are commonly in practice. These formats are as follows:

4.6.3.1 Class wide Peer Tutoring (CWPT): In this format of peer tutoring entire class participates in tutoring dyads. During each tutoring session students can participate as both Peer Tutor and tutees, or they can participate as only the tutor or the tutee. Class wide Peer Tutoring is a variation of peer-mediated instruction that has been used in elementary, middle school, and high school classrooms. In CWPT students form pairs and take turns in the roles of tutor and student.

The CWPT program was originally developed and used with special education students in their mainstream classrooms. It was very evident early on that the procedures were not only effective for the targeted students, but for the entire classroom of students regardless of their ability levels. Thus, CWPT has been researched and proven effective with the following student populations:

- Students with special needs
- Educationally labeled students
- Students at risk of school failure
- Students who are culturally and linguistically diverse
- Students with ADD and ADHD

- Students from pre-school to high school age levels and beyond

4.6.3.2 Peer Assisted Learning Strategies

It is a modified version of CWPT developed by Fuchs et al (1997) where teachers identify the children who require help in specific skills and the most appropriate children to help them learn those skills. Pairs are changed regularly, and over time as student work on a variety of skills all students have the opportunity to be "coaches" and "players". Pupils are divided into higher ability and lower ability pairings.

It's a version of classwide peer tutoring where teachers evaluate and identify students who need help with specific skills and determine the most appropriate students in the class to assist them with those skills. The students are paired as "coaches" and "players" but rotate roles as activities change and students are required to work on a variety of skills.

PALS is designed to complement, not replace, the existing math or reading curriculum by providing opportunities for students to practice what the teacher has taught. Research supports that the use of pairs in the classroom provides more focus on individual student needs rather than a teacher-directed activity that may address the needs of a few students but not be able to meet the needs of all student.

Peer-Assisted Learning Strategies (PALS) is a supplemental peer-tutoring program in which student pairs perform a structured set of activities in reading or math (PALS Reading and PALS Math, respectively The designation of tutoring pairs and skill assignment is based on teacher judgment of student needs and abilities, and teachers reassign tutoring pairs regularly.

Although PALS is for students with diverse academic needs, this intervention report focuses on the use of PALS to improve the reading and mathematics skills of students with learning disabilities.

Some benefits attributed to the PALS program include:

- Actively involves all students in tasks they can perform successfully.
- Increases student opportunity to read and practice basic math skills.
- Motivates students to do better in reading and math.
- Expands instructional resources in the classroom.
- Provides for positive and productive peer interaction.

- Creates opportunity for lower functioning students to assume an integral role in a valued activity.
- Allows students with disabilities to spend more time in least restrictive environment and increases their access to the general education curriculum.
- Helps teachers accommodate academic diversity.
- Accelerates student achievement in reading and math.
- Is affordable and easily implemented.
- Is found to be an enjoyable activity by teachers and students.

4.7 ICT for Instructions

4.7.1 Meaning of ICT and its Application in Education.

Educational systems around the world are under increasing pressure to use the new information and communication technologies (ICTs) to teach students the knowledge and skills they need in the 21st century. The 1998 UNESCO World Education Report, Teachers and Teaching in a Changing World, describes the radical implications the new information and communication technologies have for conventional teaching and learning. It predicts the transformation of the teaching-learning process and the way teachers and learners gain access to knowledge and information.

The use of computer based technology has become the need of the day due to different reasons. The technological advancement has brought the use of sophisticated hardware and software like radio, television, tape recorder, films, and transparency in the field of education. The professionals/teachers of today employ numerous information communication technology (ICT) supported methods and materials in the classroom to enhance the teaching-learning process in a more effective way. As we are entering into the era of inclusion and as it has become the fundamental right of each child to be educated, children with disabilities are being enrolled in the regular schools through the centrally sponsored scheme of the Government of India called Sarva Shiksha Abhiyan. Since, the professionals/teachers in the regular schools lag in the skills to teach the children with special needs, the knowledge about the ICT supported teaching methods for the disabled children would be of great boon to them to handle the entire class without any discrimination.

Inclusive education is a strategy based on human rights and democratic principles that confronts all forms of discrimination. Inclusive education is concerned with removing all barriers to learning, and with the participation of all learners vulnerable to exclusion and marginalization. It is a strategic approach designed to facilitate learning success for all children. Hence, it becomes the duty of a regular teacher to handle children with special needs along with normal children in his/her classroom.

So the ICT that he uses should also meet the diverse needs of children with disabilities such as children with learning disabilities, mild intellectual disability, autism, hearing impairment and visual impairment.

4.7.2 ICT in educating children with special needs

Educating all students by today's standards and for tomorrow's living most certainly includes the use of technology. Its relationship to providing essential supports for students with disabilities in areas of self-care, education, employment, recreation/leisure, and community living are readily accepted. Additionally, access to technology can provide meaningful learning experiences to develop problem solving and higher order thinking skills and to function in the world beyond the classroom. The appropriate and successful integration of technology into learning environments has the potential to benefit all students. As states and schools work to implement the requirements of educational reform required by the No Child Left Behind Act, 2001, they must ensure that all students are included, in particular students with disabilities.

Specifically, technology assists students with disabilities to:

(a) Maximize independence in academic and employment tasks;

(b) Participate in classroom discussion;

(c) Gain access to peers, mentors, and role models;

(d) Self-advocate;

(e) Gain access to the full range of educational options;

(f) Participate in experiences not otherwise possible;

(g) Succeed in work-based learning experiences;

(h) Secure high levels of independent learning;

(i) Prepare for transitions to college and careers;

(j) Work side-by-side with peers;

(k) Master academic tasks that they cannot accomplish otherwise;

(l) Enter high-tech career fields; and

(m) Participate in community and recreational activities

"Inclusive education according to UNESCO means that the school can provide a good education to all pupils irrespective of their varying abilities. All children will be treated with respect and ensured equal opportunities to learn together. Inclusive education is an on-going process. Teachers must work actively and deliberately to reach its goals".

4.7.3 Why Students Prefer ICT Activities Over Conventional Learning?

The following is the list of qualities derived by students favoring ICT activities over conventional learning. These student preferences also contribute to our understanding of why ICT enhances achievement, as because ICT;

- is infinitely patient
- never gets tired
- never gets frustrated or angry
- allows students to work privately
- never forgets to correct or praise
- is fun and entertaining
- helps individualized learning mode
- is self-paced
- does not embarrass students who make mistakes
- makes it possible to experiment with different options
- gives immediate feedback
- is more objective than teachers
- gives more meaningful contact with students than teachers
- is impartial to race or ethnicity

- is great motivator
- gives a sense of control over learning
- is excellent for drill and practice
- calls for using sight, hearing, and touch
- teaches in small increments
- help students improve their spelling
- builds proficiency in computer use, which will be valuable later in life
- eliminates the drudgery of practices certain learning activities by hand (e.g., drawing graphs)
- works rapidly-closer to the rate of human thought.

4.7.4 ICT and Inclusive Education

Inclusion should, then, be regarded as a long-lasting process which requires time, effort, competence and strong conviction by all those involved in students' education, first and foremost, by teachers. The key role of teachers in giving birth to and maintaining a truly inclusive classroom is unquestionable (Anderson et al, 2007), but such an important mission also requires that suitable, effective and barrier-free educational means should be employed. From this perspective, ICT resources are promising; there are grounds for maintaining that they help most students overcome barriers to learning, thus increasing their school achievement, together with their autonomy, willingness and self esteem. Indeed, educational research provides strong evidence that: "ICT is both a medium and a powerful tool in supporting inclusive practice. It provides wide-ranging support for communication, assisting many learners to engage with learning, including those who are hard to reach, and helps to break down some of the barriers that lead to under-achievement and educational exclusion" (Becta, 2007).

4.8 Let us Sum Up

- The Indian Education Commission (1964-66): The Indian Education Commission was the first statutory body to suggest that the education of handicapped children has to be organized not merely on humanitarian grounds, but also on grounds of

utility. The Commission observed that although the Indian Constitution had issued specific directives about compulsory education for all, including children with disabilities, very little had been done in this regard. The Commission also emphasized that the education of children with disabilities should be "an inseparable part of the general education system."

- The main elements of inclusive education are:
- A human rights issue ("Education for all" means all children, not almost all).
- Education for all in school for all disabled and non- disabled children learning to live together.
- Togetherness "enabling all to participate together in society from the beginning: contributing to social harmony and stimulating the building of relationship among individuals groups and nations.
- Breaking barriers "familiarity and tolerance for prejudices and rejection.
- The goal of education in the 21st century is not simply the mastery of content knowledge or use of new technologies. It is the mastery of the learning process. Education should help turn novice learners into expert learners—individuals who want to learn, who know how to learn strategically, and who, in their own highly individual and flexible ways, are well prepared for a lifetime of learning.
- Co-Teaching Strategies

Strategy	**Definition/Example**
One Teach, One Assist	One teacher has primary instructional responsibility while the other assists students with their work, monitors behaviors, or corrects assignments.
Station Teaching	The co-teaching pair divides the instructional content into parts – Each teacher instructs one of the groups, groups then rotate or spend a designated amount of time at each station – often an independent station will be used along with the teacher led stations.

Parallel Teaching	Each teacher instructs half the students. The two teachers are addressing the same instructional material and presenting the material using the same teaching strategy. The greatest benefit to this approach is the reduction of student to teacher ratio.
Alternative (Differentiated)	Alternative teaching strategies provide two different approaches to teaching the same information. The learning outcome is the same for all students however the avenue for getting there is different.
Team Teaching	Well planned, team taught lessons, exhibit an invisible flow of instruction with no prescribed division of authority. Using a team teaching strategy, both teachers are actively involved in the lesson. From a students' perspective, there is no clearly defined leader – as both teachers share the instruction, are free to interject information, and available to assist students and answer questions.

- Differentiating instruction means creating multiple paths so that students of different abilities, interest or learning needs experience equally appropriate ways to absorb, use, develop and present concepts as a part of the daily learning process. It allows students to take greater responsibility and ownership for their own learning, and provides opportunities for peer teaching and cooperative learning.
- Peer tutoring programs represent a viable means of improving the curricular and social interaction skills of students with autism (Odom et al., 1999). Research reveals that the **teaching of specific tutoring strategies facilitates interaction between children with autism and their socially competent peers**. Studies indicate that effects of social initiation intervention are immediately evident and substantial (Odom, McConnell, McEvoy, Peterson, Ostrosky, Chandler, et al., 1999).

- Peer Mediated Instruction and Intervention
    - Students taught roles
    - Students instruct
    - Teachers monitor/facilitate
    - Academic and social goals
- Class-Wide Peer Tutoring
    - Teams of dyads within the classroom environment
    - Highly structured teaching procedures
    - Daily point earning/public posting of points
    - Direct practice of academic skills
- Peer-Assisted Learning Strategies (PALS) is a class wide peer tutoring program. Teachers carefully partner a student with a classmate. The pair works on various activities that address the academic needs of both students. Pairs change over time. PALS can be used across content areas. The strategy provides direct opportunities for a teacher to circulate in the class, observe students, and offer individual remediation. PALS therefore allows for differentiated instruction via having partners work simultaneously on various teacher-directed activities.
- The meaning of technology-based interventions in education is subject to multiple interpretations. Over the last forty years, technology-based intervention introduced into the classroom have included television, the use of film projectors and educational films, videotapes and videodisks, and the use of stand-alone and networked computers and data terminals. For all practical purposes in today's classroom, the term "technology-based interventions" mean the utilization of computers to both deliver instruction and to enable student learning (Ringstaff & Kelley, 2002).
- In the 2003 Daniel K. Davis, Michael Wehmeyer and Steven E. Stock in their study on the utilization of Computer Technology to facilitate Money Management by Individuals with Mental Retardation yielded the result which indicated that the use of a money management software programme can be an effective tool to enable people with mental retardation to perform financial management tasks more independently.

4.9 ''Check Your Progress''

1. What is Universal Design for Learning? Discuss its importance in relevance to inclusive education.
2. Briefly discuss about peer tutoring and its types with examples.
3. How does technology influence education in an inclusive setup?
4. Enumerate the different co teaching methods with examples.

4.10 References and Further Readings

1) Burk, M. (1998). *Computerized test accommodations: A new approach for inclusion and success for students with disabilities.* Washington, D.C.: A. U. Software.
2) Dolan, B. (2000). Universal design for learning: Associate editor's column. J*ournal of Special Education Technology, 15*(4), 47–51.
3) Friend, M. & Cook, L. (1996a). *Interactions: Collaboration skills for school professionals*. Whit Plains: Longman.
4) Maher, C.A. (1984). Handicapped adolescents as cross-age tutors: Program description and evaluation. *Exceptional Children, 51,*1, 56-63.
5) McMaster, K.N., & Fuchs, D. (2002). Effects of cooperative learning on the academic achievement of students with learning disabilities: An update of Tateyama-Sniezek's review.*Learning Disabilities Research & Practice, 17*, 2 107-117.
6) Anne, M.B., & Thomas, M.S., (1989). Teaching Exceptional Students In Your Classroom. Allyn and Bacon, Boston.
7) Anderson, N., (1995). Inclusive education: Using Technology to provide higher level Cognitive Challenges. Australian Disability Review, 2, pp 34-39.
8) Dalton, D. W., Hannafin, M. J., (1988). "The Effects of Compuetr-Assisted and Traditional Mastery Methods on Computation Accuracy and Attitudes". Journal of Educational Research 82/1, pp: 27-33.