APPENDICES
**APPENDIX A**

**Survey Questionnaire for Teacher Educators teaching Paper II.**

Name of the College: ____________________________________________________________

Name of the Teacher Educator: ________________________________________________

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Item</th>
<th>Yes (%)</th>
<th>No (%)</th>
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</thead>
</table>
| 1.       | I am willing to use cooperative learning teaching techniques in my teaching.  
माध्यम अध्यापनात सहकार्यात्मक अध्यापन अध्यापन तंत्रे वापरण्यास मी इच्छुक आहे.                                                                                             |         |        |
| 2.       | Cooperative learning teaching techniques will help me to keep students active in the class.  
वर्गांमध्ये सहकार्यात्मक अध्यापन अध्यापन तंत्रे विद्यार्थ्यांना गतिविधी ठेवण्यासाठी मला मदत करतील.                                                                                                                                                       |         |        |
| 3.       | Cooperative learning teaching techniques will improve the performance of students in exams.  
सहकार्यात्मक अध्यापन अध्यापन तंत्रे विद्यार्थ्यांची परिशिषणील कामगिरी युक्तील.                                                                                                                                                      |         |        |
| 4.       | A Teacher’s Handbook will help me in using cooperative learning teaching techniques.  
एच्या विश्वासासाठी हटपुडिका मला सहकार्यात्मक अध्यापन अध्यापन तंत्रे वापरण्यासाठी उपयुक्त टंगल.                                                                                                                                      |         |        |
| 5.       | Cooperative learning teaching techniques will be useful to cater to students with diverse needs.  
सहकार्यात्मक अध्यापन अध्यापन तंत्रे विविध गरजा अस्तित्वासाठी विद्यार्थ्यांच्या गरजा पूर्ण करण्यासाठी सहाय्यक टंगल.                                                                                               |         |        |
| 6.       | I am confident and feel well equipped to use cooperative learning teaching techniques in my classroom.  
वर्गांमध्ये सहकार्यात्मक अध्यापन अध्यापन तंत्रे वापरण्यावर मला आत्मविश्वास आहे व व्याख्यान तंत्रे सुमाज्य असल्यासारखे बांधते.                                                                                      |         |        |
| 7.       | Which are the teaching strategies you follow while teaching Educational Psychology?  
शैक्षणिक मात्रेच्या विकासाच्या तुमची कृतीवाची अध्यापन कृतियांना अवलंबत?                                                                                                                                       |         |        |
8. What do you know about cooperative learning strategies?

आपणांमध्ये महाकार्यांक अध्ययन कृतियोजनांतर्विद्यालय काय माहिती आहे?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

9. Have you implemented any of the cooperative learning strategies in Educational Psychology class? If yes, which cooperative learning strategy have you used?

शैक्षणिक मानसिक शिक्षणांतर्विद्यालय मध्ये महाकार्यांक अध्ययन कृतियोजनांना साक्षात्कारातील आहे का? अग्निज्ञान कृतियोजनेता नवीनतम कारणे?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

10. What teaching strategies do you use to teach the subunit on Cooperative and Collaborative learning? (Paper II Section II Unit 6.2)

सहकार्यांक व सहयोग अध्ययन हे उपयोगिते शिक्षणांतर्विद्यालय मध्ये कृतियोजनांना आपल्यांच्या कृतियोजनेता? वापरतात?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

11. What different experience did you have while using cooperative learning as compared to traditional lecture?

पारंपारिक विद्यानुसार पठतीया तुलनेत महाकार्यांक अध्ययन वापरताना आपणांच्या कृतियोजनेता बांधल्याचे अनुभव आले?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

12. What are the benefits of using cooperative learning strategy?

सहकार्यांक अध्ययन कृतियोजनेवर वापरण्याचे फायदे कृतियोजनेता?

- For teachers शिक्षकांमध्ये:

- For students विद्यार्थ्यांमध्ये:
13. What are the problems you might encounter in the classroom during your lecture when you use cooperative learning strategy?
बंगाली सहकार्यांक अध्ययन कृतिव्यजन वापरलं तुम्हास कोणत्या समस्यांत तांड द्यालं लागेल असे बात हे?

____________________________________________________________________________________

____________________________________________________________________________________

14. If a Teacher’s Handbook on conducting cooperative learning techniques at the pre service level is developed/ prepared then: (Translate in Marathi)
सहकार्यांक अध्ययन तंत्रे वापरण्यासाठी हस्तपुस्तिका जर सेवापूर्व स्तरासाठी विकसित/तयार करायची असल्यास?

a) How will such a Handbook be useful?
अ. तसी हस्तपुस्तिका कठायिकार उपयुक्त ठरेल?

____________________________________________________________________________________

____________________________________________________________________________________

b) What should be included in the Handbook?
ब. हस्तपुस्तिकेमध्ये कायकाया समावेश असावा?

____________________________________________________________________________________

____________________________________________________________________________________

Name and signature

----Thank You----
APPENDIX B

Letters seeking for permission from Tilak College of Education for conducting the tests for the research

To,
Dr. Nandini Patil,
Principal, Tilak College of Education,
S.P. College, Lokmanya Nagar,
Pune

Sub: Permission to administer tests on the B.Ed. student teachers by Ms. Sunanda Roy.

Respected Madam,

Ms. Sunanda Roy is pursuing her PhD under my guidance on the topic related to Cooperative Learning. In this context she needs to administer the Raven Standard Progressive Matrices and a test on Paper II of the B.Ed. syllabus. She requires to administer these tests on the English Medium students of your esteemed college. For this she would need approximately 3 hours. I kindly request you to grant her permission for the same according to your convenience.

Thank you for your cooperation.

Yours,
Dr. Mrs. L.R. Vartak
To,
Dr. Nandini Patil,
Principal, Tilak College of Education,
S.P. College, Lokmanya Nagar,
Pune

Sub: Permission to administer tests on the B.Ed. student teachers by Ms. Sunanda Roy.

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Thank you for your cooperation.

Yours,

Dr. Mrs. L.R. Vartak
APPENDIX C

Certificate for attending the Cooperative Learning Workshop conducted in SNDT, Pune

S. N. D. T. College of Education for Women and P. G. Dept. of Education, (IASE), Pune - 38

National Level Workshop on Co-operative Learning

held on 2nd February 2013.

Certificate

This Certificate is awarded to Mr. / Ms. / Dr. Roy Sunanda

from Adarsha Comprehensive College of Education & Research, Pune

for his/her Active Participation.

Dr. Chitra Sohani
Co-ordinator (B.Ed.)

Dr. Mridula Ranade
Co-ordinator (M.Ed.)

Dr. Nalini Patil
Principal
APPENDIX D

Feedback Sheet for the Experts
About the Intervention Programme

Respected Madam/ Sir,

I am pursuing my Ph.D. under the guidance of Dr. Lalita R. Vartak. For the research an intervention programme will be conducted. We will be very grateful if you could kindly go through the outline of the programme and give your valuable opinions about it. The intervention programme will be conducted on the Pre Service Teachers of our college. Paper II Section I ‘Psychology of Development and Learning’ is the content selected for the research. This content will be delivered to the students through a programme using cooperative learning teaching techniques.

Please give your feedback about the programme on the bases of the four point rating scale given below:-
SA (Strongly Agree), A (Agree), D (Disagree), SD (Strongly Disagree)

Thank you for your kind co operation in the research work.

Warm regards,
Dr. Lalita R Vartak (Guide)
Ms. Sunanda Roy (Ph.D. Student)

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Item</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
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<tbody>
<tr>
<td>1</td>
<td>The objectives of the intervention programme can be properly achieved.</td>
<td></td>
<td></td>
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<td>2</td>
<td>The activities in the intervention programme are arranged systematically and sequentially.</td>
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<tr>
<td>3</td>
<td>The cooperative learning techniques chosen are appropriate to the topics.</td>
<td></td>
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<td>4</td>
<td>The programme will help the pre service teachers to understand the benefits of using cooperative learning techniques.</td>
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<td>5</td>
<td>The programme will enable the pre service teachers to have a direct experience of cooperative learning as learners.</td>
<td></td>
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<tr>
<td>6</td>
<td>The selected cooperative learning techniques can be effectively conducted in the classroom.</td>
<td></td>
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<td>7</td>
<td>The teacher will be able to conduct the techniques in the time allotted for the lectures</td>
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<td>8</td>
<td>The lesson plans and learning resources are a reflection of the activities that will be conducted in the classroom</td>
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</tbody>
</table>

9. What are the strengths of the intervention programme? (Give any three points)

10. What modifications would you like to suggest in the programme?

Name and signature of the expert
APPENDIX E
Coded Responses obtained from the Survey

7. Which are the teaching strategies you follow while teaching Educational Psychology?

- Group work
- Presentation
- Games
- Lectures
- Question answer
- Assignments are given and the students present it
- Brain storming
- Team teaching
- Memory game
- Technology based teaching
- Discussion
- Discussion
- Power Point Presentation
- Discussion; Question and answer
- Sometimes constructive approach
- Cooperative
- Technology based
- Projects
- Collaborative
- Group discussion, Power Point Presentation, Group performance competition, field visits etc.
- Discussion method – ideas from students are taken, discussions are conducted and ideas are cleared
- Discussion, pair work, cooperative learning, team teaching
- Brain storm, think pair share
- Concept mapping, lectures, group discussions, brain storming
- Discussion and lecture
- I try to include experiential learning, cooperative learning once in a while, mainly the traditional learning

Colours and their respective categories for Open Coding:

Traditional teaching
Constructive teaching
Technology Based Teaching
8. What do you know about Cooperative Learning Strategies?

- It is group work
- Students learn with the help of each other to complete the assigned task
- Involves discussion for solving of problems
- Students are active and teachers are a facilitator
- Groups are made and roles are assigned
- Teacher is a facilitator
- Work is distributed
- It gives chance to all students to put forward his own thought in group learning
- Concept of Cooperative learning, its implementation, the advantages, various strategies
- Concept and Nature, strategies used, benefits and limitations, application
- It helps for individual and group learning
- Cooperative learning strategies involve more than one/two/more components and based on sharing of knowledge and resources.
- They are strategies which involves various cooperative styles like group discussion, interactive sessions.
- Learning process—students do cooperatively
- Cooperative learning will help the students to gain confidence, help each other collect the ideas from others.
- They are taken in peer groups. The work is allotted in groups and teacher works as a guide, facilitator.
- Learning together, an instructional strategy used for small group
- Cooperative learning concept and techniques
- It is a team work which enhances learning capacity
- It is an effective learning strategy to bring about learning. Experiential and constructivist learning is also achieved using this strategy

Colours and their respective categories for Open Coding:

- Theoretical Aspects
- Student’s Role
- Teacher’s Role
9. Have you implemented any of the Cooperative Learning Strategies in Educational Psychology class? If yes, which Cooperative Learning Strategy have you used?

- Yes
  - Group Discussion
  - Group work
  - Pair work
  - Think pair share
- No
  - Brain storming, student teams achievement, Think Pair Share
  - Think Pair Share, Brain storming
- No
  - Group teaching
  - Discussion
  - Think pair share
  - Group discussion
  - Interactive sessions
  - Presentation based on peer discussion
  - Group Performance Competition
  - Pair work
  - Discussion in groups
  - Think pair share
  - Yes many times
  - Not yet
  - Think Pair Share

Colours and their respective categories for Open Coding:

Pair Work
Group Work
Not used
10. What teaching strategies do you use to teach the subunit on Cooperative and Collaborative Learning?

- Discussion method
- Group work
- Presentation
- Project
- Seminar
- Jigsaw
- Question and answer
- Think Pair Share
- Group achievement
- Discussion
- Power Point Presentation with demonstration of some techniques like Think Pair Share
- Think Pair Share
- Pair share, group discussion

Colours and their respective categories for Open Coding:
Cooperative Learning Techniques
Other techniques or methods of teaching
11. What different experience did you have while using Cooperative Learning as compared to traditional lecture?

- Students are more active
- Gives scope for their thought
- Develops feeling of cooperation
- Opportunities for give and take of thoughts
- All students participate
- Reduces fear
- Increases satisfaction
- Avoids unnecessary competition
- Learning without stress
- Based on the constructivist approach
- Learning is thorough
- Learning by doing
- Develops respect
- Helps in retention
- Sharing their thoughts and opinions
- Students enjoy
- More student’s involvement, students can explore in many ways
- Develops positive independence
- Logical thinking is developed
- Leadership development
- It is a student centred method and they are actively involved in the learning process.
- It is an effective way of teaching individuals and groups for better concept clarity
- It involves the sharing of ideas, thoughts, concepts etc. and gives ample scope to minimise the dictatorship of the teacher.
- Everyone was an active participant and active listener, social interaction improved, quality required for effective teachers improved like patience, positive attitude, confidence etc.
- Students learn better when they discuss, share their opinions, debate and it also works better since it is based on the principles of learning by doing, retention is also better
- Students learn to generalise the concepts
- It is a new concept which is acceptable to all
- Students are more active, there is emphasis on self-learning
- It makes every learner active
- Feeling of sharing develops
- We can take students participation in teaching learning process. We get the opportunity to share their knowledge.
- Active learning making students alert and interested in learning

Colours and their respective categories for Open Coding:
Student’s Benefits: Cognitive Benefits, Social Benefits and Emotional Benefits
Teacher’ Benefits: Personal and in the learning process
12. What are the benefits of using Cooperative Learning strategy?

- In less time more content is covered
- Through observation evaluation can be done
- Work becomes more systematic
- Avoids diversion from the topic
- Increases rapport
- Developing various skills
- Gives new insights
- Helps to remain updated
- No need for spoon feeding
- Helps to know our students
- Scope for novelty
- Teacher’s proceed towards perfection in planning and execution of various strategies
- Develops habit of planning and implementation
- Gets additional material from students
- Teacher gets an opportunity to listen to or know the student’s views, ideas
- Many unexposed areas can be exposed
- Can give individual attention
- Objectives of teaching and instructing are achieved
- Very effective teaching strategy through which concepts can be cleared
- Large portion can be finished
- Teaching with purposeful interaction
- Useful to teach new concepts
- Something new strategy in teaching
- Group discovery approach develops
- Teacher is able to make ability group of students
- Can make classroom teaching interactive
- Focuses on paedocentric learning and acts as a facilitator

Colours and their respective categories for Open Coding:
- Pedagogy
- Rapport with students
- Gaining knowledge
For students:
- Facilitates self-learning
- Students are active
- Improves confidence
- Broadens your views
- Learning without stress
- Learn to be cooperative
- Helps to get in depth knowledge
- Interest in learning
- Gives scope for experiential learning
- Opportunities for sharing and exploring
- Chance to develop problem solving ability (to know our self-i.e. where I stand as compared to others).

- Interaction
- Active involvement
- Develops confidence
- Enjoys active involvement
- Develops leadership qualities
- Social interaction
- Interdependence, confidence, sharing, self-learning
- Increases retention
- Develops student’s skill in verbal communication
- Students learn to help each other
- Students get an opportunity to express fluently in front of the class
- Passive listeners become active
- Shy students speak, confidence increases
- They are attentive as it is interactive
- Comfortable and enjoyable
- Learning with comprehension
- Increases confidence and encourage to collect the content
- Self learning
- Positive dependency
- They discover information by themselves
- Students can express their views
- Becomes interested, involved and are actively involved in learning

Colours and their respective categories for Open Coding:
Cognitive benefits
Affective benefits
Beneficial for communication skills
Beneficial for social skills
Benefits- promotes active learning
13. What are the problems you might encounter in the classroom during your lecture when you use Cooperative Learning strategy?

- Difficulty in evaluation
- Classroom management
- Time management
- Cannot confirm if the students have completed the task
- All students do not like to work in groups
- Space management
- Lack of material
- All students may not participation
- How to make groups
- Resources
- Requires a lot of teacher preparation
- Smart students try to neglect other student’s idea
- Some shy students get a chance to keep quiet or hide
- Discipline
- Large class strength
- Resources: books, material (library) ICT facilities
- Teacher: should be aware of cooperative learning strategies
- Time management
- Requires more preparation
- Many shy, timid students may remain aloof from the learning teaching process
- Sometimes language becomes a barrier to achieve the objective
- Group should be heterogeneous with all types of students for effective learning.
- Initially classroom control, deviation from the topic
- Time management, diversity of thinking
- Deal with individual differences
- Crowded class
- Some students may not be involved fully
- Someone may take over the group
- Concepts may not be understood by all
- Time consuming, methodology
- Difficulty arises in arrangement in the classroom for conducting the lesson using discussion and round table techniques.

Colours and their respective categories for Open Coding:
Management of Classroom Activities
Behavioural Management
Management of Physical Resources
Time Management
14. If a Teacher’s Handbook on conducting Cooperative Learning techniques at the Pre Service Level is developed/ prepared then:

a. How will such a Handbook be useful?
   - Useful to select activities
   - To implement them
   - Teacher’s role will become clear
   - Objectives behind each activity will be specified
   - Useful in getting direction in classroom implementation
   - Useful to plan the time
   - Understanding the theoretical part of Cooperative Learning
   - Helps to understand various techniques
   - How to use them
   - To know different techniques
   - It will help teachers get acquainted with various strategies
   - Will give proper guidelines as well
   - How to use with examples
   - For proper guidance how to use cooperative learning techniques
   - The teacher shall get an extensive guidance for conducting cooperative learning
   - Concept of Cooperative Learning will become more clear
   - Actual implementation will be remembered for a longer period of time.
   - Objectives will be achieved
   - Proper guidance, use of strategies
   - As a guideline to bring uniformity
   - It will work as a guide line for teachers helping in systematic way in conducting the strategy.

Colours and their respective categories for Open Coding:
- Theoretical Utility
- Provide Guidelines
- Practical Utility
b. What should be included in the Handbook?

- Cooperative Learning techniques
- Background and importance of the techniques
- Precautions while implementing
- Guidelines for teachers
- Specific instructions for classroom management
- Techniques suitable for content topics
- Activities for evaluation
- Suitable learning resources
- Lesson notes or lesson plan samples
- Lesson note formats
- Particular unit with sample lesson notes and teacher's activities.
- Various strategies of cooperative learning
- Ways to implement
- Shortcomings of various techniques
- Appropriateness with concerned topics with examples
- Cooperative learning strategies
- Specimen examples of content from which we can use this method.
- The essential points how to conduct an ideal cooperative learning teaching session.
- Concept; advantage; techniques- background, steps, demonstration; teaching through Cooperative Learning.
- Concept of Cooperative Learning, various strategies for implementing, with examples and importance.
- Concept, nature and activities
- Concept, cooperative method, how to use properly, give some examples.
- Concept of cooperative learning, how to conduct, various strategies.

Colours and their respective categories for Open Coding:

- Implementation
- Theoretical Aspects
- Lesson Notes
- Learning Resources
APPENDIX F

Teacher’s Handbook on Cooperative Learning

Paper II Section I:

Psychology of Development and Learning

B.Ed. Syllabus

(Revised 2008)
TEACHER’S HANDBOOK ON COOPERATIVE LEARNING

Paper II Section I: ‘Psychology of Development and Learning’

B.Ed. Syllabus (Revised 2008)
PREFACE

Most of the learning that is done in schools or colleges is very passive where learners are expected to sit back, listen, absorb and recall. Cooperative learning actively engages the learners in his or her learning process by creating an opportunity for teaching and learning to occur between peers. Research suggests that comparatively cooperative learning techniques have been used in schools for young learners more frequently than for learners at higher education levels. However it is also observed that cooperative learning results in positive peer pressure on all individuals to achieve group goals.

In an education system that typically promotes individualism and independence, the experience of cooperative learning introduces the understanding that one needs to rely on and have connections with others to succeed. This sense of interdependence is vital to successful and satisfying functioning in the adult world. Finally, one of the most valuable uses of cooperative learning is to teach social and interpersonal skills.

The National Curriculum Framework (2009) has emphasised the use of cooperative learning technique in classroom interaction. Thus teachers should be well equipped with the skills and resources to conduct these techniques successfully in their classrooms. Further the National Curriculum Framework for Teacher Education (2010) also highlights the need for pre service teachers to work in teams and make group presentations rather than work individually.

The purpose of this handbook is to offer teacher educators who train future teachers with resources required to implement cooperative learning teaching strategies in their classrooms. The book is presented in 7 parts which is given as follows:

1. The concept of cooperative learning;
2. Advantages and limitations of using cooperative learning techniques in classroom teaching and
3. General instructions for teachers;
4. Students’ role
5. Cooperative learning teaching techniques used by the author as a part of an experiment on the pre service teachers;
7. Evaluation in the form of a teacher made achievement test.

This book is a product of a collaborative effort between the author, her guide and the experts who gave very constructive inputs to make this handbook as comprehensive as possible.

I hope this handbook will be useful for not only teacher educators, but also teachers of any education levels who are interested in using cooperative learning teaching techniques in their classrooms. Personally, I have enjoyed the interaction I could have with my students because of using cooperative learning teaching strategies in my classroom. Hence it is my earnest wish that my fellow teachers also get to experience the same.
THEORETICAL BASIS OF THE PROGRAMME:

Guide: Dr. Lalita R. Vartak

Researcher: Ms. Sunanda Roy
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1. Concept of Cooperative Learning

**Constructivism** views learning as a process in which the learner actively constructs or builds new ideas or concepts based upon current and past knowledge or experience (Sharma, 2010). The theory behind cooperative learning is based mainly on Lev Vygotsky’s Social Development Theory. Vygotsky’s Social Development Theory has also been termed *Social Constructivism*. The primary assumption of the social developmental perspective is that interaction among students increases their mastery of the concepts in the tasks. Theorists such as Vygotsky (1978) hold the view that learning first takes place in interaction among students before it becomes mental processes for the individual. (Allison, Chafe, 1998). Cooperative learning theory is an offshoot of Constructivism. While Constructivism focuses on personal experience as the foundation for learning new material, cooperative learning utilizes not only the student’s own experience to solidify knowledge, but also uses the experiences of others. Both theories emphasize the importance of interactivity with respect to the design and implementation of lesson plans. (Douma, 2006).

**Cooperative learning** is a successful teaching strategy in which small teams, each with students of different levels of ability, use a variety of learning activities to improve their understanding of a subject. Each member of a team is responsible not only for learning what is taught but also for helping teammates learn, thus creating an atmosphere of achievement. Students work through the assignment until all group members successfully understand and complete it. (Kagan, 1994).

It is only under certain conditions that cooperative efforts may be expected to be more productive than competitive and individualistic efforts. Those conditions which are
also the *elements of cooperative learning* which are stated by David W. Johnson and Roger T. Johnson:

1. Clearly perceived positive interdependence
2. Considerable promotive (face-to-face) interaction
3. Clearly perceived individual accountability and personal responsibility to achieve the group’s goals
4. Frequent use of the relevant interpersonal and small-group skills
5. Frequent and regular group processing of current functioning to improve the group’s future effectiveness

1. **Positive Interdependence**: The students should believe that they "sink or swim together." Within cooperative learning situations, students have two responsibilities:
   a) learn the assigned material, and b) ensure that all members of the group learn the assigned material. Following are the ways to ensure positive interdependence among students:
   a. **Positive Goal Interdependence** Students perceive that they can achieve their learning goals if and only if all the members of their group also attain their goals.
   b. **Positive Reward -- Celebrate Interdependence** Each group member receives the same reward when the group achieves its goals.
   c. **Positive Resource Interdependence** Each group member has only a portion of the resources, information, or materials necessary for the task to be completed; the members’ resources have to be combined for the group to achieve its goals.
   d. **Positive Role Interdependence** Each member is assigned complementary and interconnected roles that specify responsibilities that the group needs in order to complete the joint task. Teachers create role interdependence among students when
they assign them complementary roles such as reader, recorder, checker of understanding, encourager of participation, and elaborator of knowledge. Such roles are vital to high-quality learning.

2. **Face to Face Promotive Interaction:** Positive interdependence results in promotive interaction. Promotive interaction may be defined as individuals encouraging and facilitating each other's efforts to achieve, complete tasks, and produce in order to reach the group's goals.

3. **Individual Accountability/Personal Responsibility:** To ensure that each student is individually accountable to do his or her fair share of the group’s work, teachers need to assess how much effort each member is contributing to the group’s work, provide feedback to groups and individual students, help groups avoid redundant efforts by members, and ensure that every member is responsible for the final outcome. Common ways to structure individual accountability include:

   a. Keeping the size of the group small. The smaller the size of the group, the greater the individual accountability may be.
   b. Giving an individual test to each student.
   c. Randomly examining students orally by calling on one student to present his or her group's work to the teacher (in the presence of the group) or to the entire class.
   d. Observing each group and recording the frequency with which each member contributes to the group's work.
   e. Assigning one student in each group the role of checker. The checker asks other group members to explain the reasoning and rationale underlying group answers.
   f. Having students teach what they learned to someone else. When all students do this, it is called simultaneous explaining.
4. **Interpersonal and Small-Group Skills:** In order to coordinate efforts to achieve mutual goals, students must: 1) get to know and trust each other, 2) communicate accurately and unambiguously, 3) accept and support each other, and 4) resolve conflict constructively (Johnson, 1990, 1991; Johnson & F. Johnson, 1991).

Groups improve as members learn to contribute positively, acquire trust and manage conflict. These skills are not innate; they must be learned by the teacher and taught to the students. In cooperative learning groups, students learn academic subject matter (task work) and also interpersonal and small group skills (teamwork). Thus, a group must know how to provide effective leadership, decision-making, trust-building, communication, and conflict management. Given the complexity of these skills, teachers can encourage much higher performance by teaching cooperative skill components within cooperative lessons.

5. **Group Processing:** Group processing may be defined as reflecting on a group session to: 1) describe what member actions were helpful and unhelpful, and 2) make decisions about what actions to continue or change. The purpose of group processing is to clarify and improve the effectiveness of the members in contributing to the collaborative efforts to achieve the group’s goals.

There are two levels of processing -- small group and whole class. In order to ensure that small-group processing takes place, teachers allocate some time at the end of each class session for each cooperative group to process how effectively members worked together.

In addition to small-group processing, the teacher should periodically engage in whole-class processing. When cooperative learning groups are used, the teacher observes the groups, analyzes the problems they have working together, and
gives feedback to each group on how well they are working together. The teacher systematically moves from group to group and observes them at work. A formal observation sheet may be used to gather specific data on each group. At the end of the class period the teacher can then conduct a whole-class processing session by sharing with the class the results of his or her observations. If each group has a peer observer, the results of their observations may be added together to get overall class data.

An important aspect of both small-group and whole-class processing is group and class celebrations. It is feeling successful, appreciated, and respected that builds commitment to learning, enthusiasm about working in cooperative groups, and a sense of self-efficacy in terms of subject-matter mastery and working cooperatively with classmates. (Johnson & Johnson, 2002)

There is a difference between simply having students work in a group and structuring groups of students to work cooperatively. A group of students sitting at the same table doing their own work, but free to talk with each other as they work, is not structured to be a cooperative group, as there is no positive interdependence. Perhaps it could be called individualistic learning with talking. For this to be a cooperative learning situation, there needs to be an accepted common goal on which the group is rewarded for its efforts. If a group of students has been assigned to do a report, but only one student does all the work and the others go along for a free ride, it is not a cooperative group. A cooperative group has a sense of individual accountability that means that all students need to know the material or spell well for the whole group to be successful. Putting students into groups does not necessarily gain a cooperative relationship; it has to be structured and managed by the teacher or professor. (Thousand, Villa & Nevin, 1994).
Difference between Collaborative and Cooperative Learning:

In its purest form, collaborative learning refers to learning activities in which the mode of learning is carried out between pairs of learners or small groups of learners. Learning within the classroom is intentional and by design not left up to the whim of the teacher or the students. The shifting of responsibilities to students aids in meaningful learning taking place within a classroom. The definition of the word collaborate means to work together or to co-labour together. In like manner, collaborative groups work together toward a common goal the teacher has articulated (Barkley et al., 2005). As with cooperative learning, collaborative learning has found its roots in a constructivist epistemology.

In his research on the differences between collaborative and cooperative learning, Ted Panitz (1997) defined both instructional methodologies: (a) “Collaboration is a philosophy of interaction and personal lifestyle where individuals are responsible for their actions, including learning and respect [for] the abilities and contributions of their peers” (p. 1), and (b) “Cooperation is a structure of interaction designed to facilitate the accomplishment of a specific end product or goal through people working together in groups” (p. 1).

Table No. 1.1

Differences between Collaborative and Cooperative Learning

<table>
<thead>
<tr>
<th>Collaborative Learning</th>
<th>Cooperative Learning</th>
</tr>
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<tbody>
<tr>
<td>◇ More student-centred</td>
<td>◇ More teacher-centred</td>
</tr>
<tr>
<td>◇ More onus of learning on the learner</td>
<td>◇ Less onus on the learner</td>
</tr>
<tr>
<td>◇ focuses on the process of working together</td>
<td>◇ focuses on the product of the working together.</td>
</tr>
<tr>
<td>◇ is more focused on interacting and being responsible for actions</td>
<td>◇ concentrates on accomplishing a goal. (Goyak, 2009)</td>
</tr>
<tr>
<td>◇ can take place any time students work together</td>
<td>◇ takes place when students work together in the same place on a structured project in a small group. (Thirteen ed online, 2014)</td>
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</table>
Cooperative Model: (Salvin, 1990)

- The teacher maintains complete control of the class, even though students work in groups to accomplish the goal.
- The teacher asks a specific question of a course.
- The teacher provides additional resources for students to read or review.
- The groups present their results to the whole class and discuss their reasoning.
- The teacher might use specific structures to help facilitate the group interaction.
- The teacher maintains control of the process at each stage of the students work.

Collaborative Model: (Rafael, 2010).

- The group would assume almost total responsibility for answering the question.
- The students determine if they had enough information to answer the question.
- The collaborative teacher assesses the progress of each group and provides suggestions about each group’s approach and the data generated.
- The teacher would be available for consultations and would facilitate the process by asking for frequent progress reports from the group.
- The final product is determined by each group, after consultation with the teacher.
- The students develop a very strong ownership for the process.

Research suggests that cooperative and collaborative learning bring positive results such as deeper understanding of content, increased overall achievement in grades, improved self-esteem, and higher motivation to remain on task. Cooperative learning helps students become actively and constructively involved in content, to take ownership of their own learning, and to resolve group conflicts and improve teamwork skills. (Thirteen ed online, 2014).
2. **Advantages and Limitations of Cooperative Learning Teaching Techniques**

Like all techniques in teaching cooperative learning teaching technique also has advantages and limitations. Some of them have been given in Table no. 2.1

Table 2.1

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Limitations</th>
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<tbody>
<tr>
<td>It has a positive effect on student learning when compared to individual or competitive conditions</td>
<td>A burden is making the students responsible for each other’s learning apart from themselves</td>
</tr>
<tr>
<td>It has the potential to produce a level of engagement that other forms of learning cannot</td>
<td>Groups of mixed ability, low-achieving students may become passive and do not focus on the task</td>
</tr>
<tr>
<td>Students may explain things better to another student than a teacher to a class. Students learn how to teach one another and explain material in their own words</td>
<td>Depending on an individual’s motivation and interest on a particular subject that will determine how well they would learn</td>
</tr>
<tr>
<td>Positive interdependency is achieved as individuals feel that they cannot succeed unless everyone in their group succeeds</td>
<td>High stakes create increased chances for conflict and therefore need for conflict resolution skills that may consume a lot of time.</td>
</tr>
<tr>
<td>Interpersonal and collaboration skills can be learned in a cooperative learning activity</td>
<td>It is difficult for the teacher to be sure that the groups are discussing the academic content rather than something else.</td>
</tr>
<tr>
<td>Cooperative learning has the potential to meet more learning style needs more of the time than individualized direct instruction</td>
<td>Higher ability students may not experience the stimulation or challenge that they would with other higher ability students.</td>
</tr>
<tr>
<td>Higher ability students are in a position to be experts, leaders, models and teachers; lower ability students get the benefits of having higher ability students in their group.</td>
<td>Lower ability students may feel perpetually in need of help rather than experiencing the role of leader or expert relative to the others in their group.</td>
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(Transition to Beginning Teaching, 2016)

When one goes through the limitations of the technique, it becomes clear that these limitations can be reduced considerably if the teacher is skilful enough to implement cooperative learning teaching techniques in the classroom. Ultimately, the effectiveness of cooperative learning depends on how well a teacher designs and communicates the activity and how the students take to the task.
3. **General instructions for Teachers:**

![FIGURE 3.1 Teacher’s Role in Cooperative Learning](image)

### 3.1 Role of the Teacher: Pre - Active Phase - Pre instructional decisions regarding how to:

- Formulate the academic and social objectives or goals of the class:

  Specify the product and/ or behaviours that are expected at the end of the activity:

  a) Identify the outcome: illustrate the style, format and length of the product that is expected. The teacher can display the format as a guideline.

  b) Check for understanding: the teacher can ask a student to repeat the instructions to make sure the students have understood what is expected out of them. Having one member of each group restate the goal and the teacher's directions for attaining it is time well spent.

  c) Set a cooperative tone: Normally students begin cooperative learning tasks as individuals competing against each other. While competition has its place in cooperative learning i.e. competing against other groups or one's own previous performance, effect group work depends on collaboration and not competition.
So the teacher must insist that the group resolve differences and come to a consensus about their product as a contribution made by the group as a whole.

☞ Decide the size of the group:

The most efficient group size is between 6 to 8 members per group. Larger groups tend to cause more arguments and possibilities of some members remaining passive during the activity.

☞ Choose the method of assigning students into the group:

Random grouping can be especially effective with experienced cooperative learners or if the teacher plans to change group membership often. To create random groups, one can simply have students *count off* from one to six. All of the ones form a group; all of the twos form another group, and so on.

There are many other fun ways to assign groups randomly. For example, you can hold a *lottery* in which students pick numbers out of a hat. Numbers one to six form one group, numbers seven to twelve form another; and so forth.

The teacher can also use *cards naming sets* of a particular type of item. All students who draw items belonging to the same set form a group. For example, all students whose cards name types of flowers belong in one group, students whose cards name farm animals belong in another group, those with cards naming heavy-metal bands form a third group, etc. Students have a fun and lively time discovering who belongs in the same group.

The teacher can come up with their own ways of grouping. For example the teacher can group students according to the first letters of their names or according to the months they were born in (Refer to Session 8).

☞ Decide which roles to assign to the group members:
Assign roles at first; students can choose their own later. Assigning roles is very important, especially at first. Consider the behavior patterns of students, and assign roles that will complement those patterns. Group work needs to be structured so that everyone has a part to play. In other words, there needs to be positive interdependence. Just as members of a surgical team work together, with each person contributing his or her own special skill, students work effectively in teams when everyone has a unique role that is vital to the group’s success. Some roles that can be assigned to facilitate a group’s work and to promote communication and sharing among its members are group leader, researcher, recorder and summarizer. Use as many roles as needed, modify them, combine them, or the teacher can invent roles too.

Assign roles carefully, especially at first, taking into account students’ behavior patterns. A shy student might be most comfortable as a recorder, while a student who likes attention might make the best reporter. The facilitator is a role that some students will always want and others will avoid. Be careful not to stereotype. Sometimes the most unlikely students will make the best leaders. (Holt, Rinehart & Winston, 2012)

Arrange the room and seating arrangements:

One of the most important elements of cooperative learning is face to face promotive interaction. Hence if the furniture in the classroom can be moved around then the students can rearrange their seats to face each other. Some of the seating arrangement is given in figure no. 3.2:
Arrange the materials for the class and the activity/activities:

The teacher must prepare in advance the materials for distribution to the group. Indicate on the materials that students are to work together. Avoid work activities that don't really encourage (or require) students to actively collaborate in a group. When students are working on independent tasks, simply clustered at tables, a revision is necessary.

3.2 Role of the Teacher: Interactive Phase - During the instruction regarding how to:

- Explain the assignment to the students:

  The teacher must explain what will occur. Explain the rules which include; contributing to the team effort; listening to teammates; helping other team members; and asking the teacher for help only if it is a question of everyone in the group.

- Mention clearly the time limit for the activity:

  The time allotted for the activity depends on the complexity of the task. The teacher needs to determine the time to devote to group work and the time to devote to all groups coming together to share their contributions. This normally will consume 60 to 80 percent of the time devoted to the cooperative learning activity. So the teacher must make it clear before students begin their activity regarding the time allotted for it.

- Explain the behaviour students are expected to follow:

  The teacher must encourage the following behavior from the students:

  * How to communicate one’s own ideas and feelings.
  * Make messages complete and specific.
* Make verbal and nonverbal messages congruent to avoid misunderstandings in the groups
* Convey an atmosphere of respect and support for each other’s ideas without feeling of ridicule.
* Ask for feedback from listeners about what was told by a group member.
* Resolve conflicts amicably without passing personal remarks.

Supervise the activity, give necessary guidance:

Supervising the cooperative learning activity includes the teacher telling students where to find needed information and repeating how to complete the task. The teacher needs to identify when a group needs assistance and remind them of the group goal. The teacher should move from one group to another at least once in the beginning of the cooperative learning activity. The again move to a group having troubles with the task. Some groups need more vigilance than others.

If there arises a heated discussion within a group which may go out of control the teacher needs to intervene and divert the attention of the students from the controversy to the goal of the group.

The teacher may need to give emotional support and encouragement to frustrated groups members.

Encourage passive students to be active in the group activity:

One approach to drawing non engaging learners into the cooperative activity is to structure the task so that success depends on the active involvement of all group members. Request a product that clearly defines each members of the group. The teacher may also make pairs within groups to keep each member active.

Prompt amount of time left for completing the activity:
Although a student is made the time keeper the teacher must remind the students about the time left to finish the activity. Management of time is a crucial aspect in cooperative learning and that can be done by the teacher being alert about the time taken for each activity and maintaining the time schedule for each session. However the teacher must make sure the groups complete the activity before sharing it with the class.

- Give time for the groups to share and note down the matter.

   Enough time should be given to the groups to share their responses. If this is not done the students will not be motivated to do the following activities as they will get a feeling that it is a waste of time as they will not get enough time to share their group contribution properly. This will hinder future cooperative learning activities. Thus the teacher must give appropriate time for each group to share in the class.

- Appreciate the whole group for good work done.

   While appreciating the product the teacher must give reinforcement and appreciation according to the group’s performance as a whole. It is a group effort and the appreciation should be given to the group as a whole and not individually.

- Allow time for the students to celebrate their work:

   The teacher can ask the whole class to appreciate the work done by groups who have performed very well by giving them a round of applause. The group members too may be allowed to celebrate it by displaying it in the class. This will motivate other students to improve their performance in future activities.

- Discuss the topic and link it to the matter given in text books and reference books:

   Once all the groups have shared their answers the teacher should connect the responses with the matter given in the text books or reference books. This will help the students link their responses to the syllabus and guide them to prepare their learning materials.
3.3 Role of the Teacher: Post – Active Phase – After the instruction regarding how to:

- Identify the Cooperative Learning Teaching Techniques used at the various phases of the session:

  The teacher can discuss and make students identify the cooperative learning techniques used in the session. This helps the students to not only learn the content matter, but also get accustomed to the cooperative learning techniques. The advantage of doing this is that the next time the students will require fewer instructions and will be familiar with the roles they have to perform. This in turn saves time and more time can be devoted in the actual activity and sharing the product of each group in the class.

- Conduct a discussion to reflect on the group processing:

  One of the most important elements of cooperative learning is group processing. This is the stage at which the group evaluates its performance on a particular task. It is a very useful activity as the group discusses what were the things that worked and the things that were hurdles in reaching their goals. They also get the time to decide what can be done better to improve their performance as a group in future cooperative learning activities. The teach can guide these discussions by asking the group members to discuss on the following questions:

  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
4. **Students’ Roles:**

Division of labour within and across groups is an important dimension of cooperative learning that is not shared by most group discussion methods. It is this task specialization, and the division of labour it often requires, that promotes the responsibility and idea sharing that marks an effective cooperative learning activity. Some of the more popular cooperative student role functions that can be assigned within or across groups are suggested by Johnson and Johnson (1991):

1. **Summariser:** paraphrases and plays back to the group the major conclusions to see if all agree to the points
2. **Researcher:** reads reference documents and gets background information when more data is required.
3. **Time Keeper:** keeps track of time and prompts the time making sure the task is completed in the allotted time given.
4. **Noise Checker:** maintains control over voices levels of the group members so that they use a soft voice while discussing.
5. **Group Leader/Facilitator** The facilitator is a leadership role. The facilitator keeps an activity running smoothly by presiding over the work flow. He or she manages the group so that all members have a chance to talk, questions are answered, students listen to one another’s ideas, and ideas are substantiated with reasons and explanations.
6. **Recorder** The recorder records data and answers questions posed to the group.
7. **Reporter** The reporter explains the group’s findings to the teacher or the entire class.
8. **Safety officer** The safety officer makes sure safety practices are followed and notifies the teacher of any unsafe situations.
9. **Checker** The checker makes sure that everyone has finished his or her worksheet or other individual assignment.

10. **Materials manager** The materials manager gathers activity materials at the outset, monitors their use during the activity, and organizes the clean-up and return of materials to their proper place after an activity.

    In addition to these specific roles assigned to the individuals in a group there are other responsibilities for all group members to perform. They are:

1. Ask other group members to explain their points clearly whenever you do not understand.

2. Be sure to check your answers and those of others in your group against references or the text.

3. Encourage members of your group to go farther, to expand on their points to surpass previous accomplishments and expectations.

4. Let everyone finish what they have to say without interrupting whether you agree or disagree.

5. Don’t be bullied into changing your mind, if you really don’t want to.

6. Use low voices in the group and loud voices to share in the classroom.

7. Be critical of the idea, not the individual and using positive words and gestures.
   Use constructive criticism. (Borich, 1996)
5. **Cooperative Learning Teaching Techniques used in the Handbook:**

Within cooperative learning groups, students discuss the material to be learned with each other’s help and assist each other to understand it and encourage each other to work hard. Cooperative learning groups may be used to teach specific content (formal cooperative learning groups) to ensure active cognitive processing for information during a lecture or demonstration (informal cooperative learning groups) and to provide long – term support and assistance for academic progress (cooperative base groups). Any assignment, in any curriculum for any age student, can be done cooperatively.

a) Formal Cooperative Learning is students working together for one class period to several weeks to achieve shared learning goals and complete jointly specific tasks and assignments (such as decision – making or problem – solving, completing a curriculum unit, writing a report, conducting a survey or experiment, or reading a chapter or reference book, learning vocabulary, or answering questions at the end of the chapter).

Any course requirement or assignment may be reformulated to be cooperative.

In formal cooperative learning groups, teachers:

i. Specify the objectives for the lesson. In very lesson there should be an academic objective specifying the concepts and strategies to be learned and a social skills objective specifying the interpersonal or small group skills to be used and mastered during the lesson.

ii. Make a number of pre-instructional decisions. The concerned teacher decides on the size of groups, the method of assigning students to the groups, the roles students will be assigned, the materials needed to conduct the lesson and the way the room will be arranged.
iii. Explain the task and the positive interdependence. The respective teacher clearly defines the assignment, teaches the required concepts and strategies, specifies the positive interdependence an individual accountability, gives the criteria for success and explains the expected social skills to be engaged in.

iv. Monitor students’ learning and intervene within the groups to provide task assistance or to increase student interpersonal and group skills. The class teacher systematically observes and collects data on each group as it works. When it is needed, the teacher intervenes to assist students in completing the task accurately and in working together effectively.

v. Assess students’ learning and helping them process how well their groups functioned. Students’ learning is carefully assessed and their performances are evaluated. Members of the learning groups then process how effectively they have been working together.

b) Informal Cooperative Learning consists of having students work together to achieve a joint learning goal in temporary ad–hoc groups that last from a few minutes to one class period (Johnson, Johnson & Smith, 1991).

During a lecture, demonstration, or film, informal cooperative learning can be used to:

i. focus student’s attention on the material to be learned;

ii. set a mood conducive to learning;

iii. help set expectations as to what will be covered in the class session;

iv. ensure that students cognitively process the material taught; and

v. provide closure to an instructional session.

During direct teaching the instructional challenge for the teacher is to ensure that the students do the instructional work of organizing material, explaining it,
summarizing it, and integrating it into existing conceptual structures. Informal cooperative learning groups are often organized so that students engage in three – to five minute, focussed discussions before and after a lecture and two – to – three minute, turn – to – your – partner discussions interspersed throughout a lecture session (Sharma & Sharma, 2008)

5.1. Think-Pair-Share:

It is a structure first developed by Professor Frank Lyman at the University of Maryland in 1981 and adopted by many writers in the field of co-operative learning since then. It introduces into the peer interaction element of co-operative learning the idea of ‘wait or think’ time, which has been demonstrated to be a powerful factor in improving student responses to questions.

Steps:

1. Teacher poses a problem or asks an open-ended question to which there may be a variety of answers.
2. Teacher gives the students ‘think time’ and directs them to think about the question.
3. Following the ‘think time’ students turn to face their Learning Partner and work together, sharing ideas, discussing, clarifying and challenging.
4. The pair then share their ideas with another pair, or with the whole class. It is important that students need to be able to share their partner’s ideas as well as their own.
Applications:

- Before a lesson or topic to orient the class (previous knowledge etc).
- During teacher modeling or explanation.
- Any time, to check understanding of material.
- At the end of a teacher explanation, demonstration etc, to enable students to cognitively process the material.
- To break up a long period of sustained activity.
- Whenever it is helpful to share ideas.
- For clarification of instructions, rules of a game, homework etc.
- For the beginning of a plenary session.

This is an essential structure to introduce early in the process of establishing the ‘co-operative classroom.’ It ensures a high level of engagement (it is hard to be left out of a pair!) and is more secure than a large group.

Think, Pair, Share has many advantages over the traditional questioning structure. The ‘Think Time’ incorporates the important concept of ‘wait time’. It allows all children to develop answers. Longer and more elaborate answers can be given. Answers will have reasons and justifications because they have been thought about and discussed. Students are more willing to take risks and suggest ideas because they have already ‘tested’ them with their partner.

5.2. Numbered Heads Together:

The structure of Numbered Heads Together is derived from the work of Spencer Kagan. There are a number of variations on the method, some very simple...
and others with a greater degree of complexity. This structure can be used in conjunction with ‘Think, Pair, Share’ early in the development of the Co-operative Classroom.

**Steps:**

1. Number off the students in each group, up to four. If one group is smaller than the others have no. 3 answer for no. 4 as well. The teacher can give numbers or students can give numbers themselves.
2. Teacher asks the students a question or sets a problem to solve. It must be stressed that everyone in the group must be able to participate and answer the question.
3. Ensure enough ‘wait time is given for the group to do the task.
4. The teacher now asks for an answer by calling a number. (this might be at random or can initially decided by the teacher in order to ensure the process is successful) The students with the number called then take it in turns to answer.
5. If there are not enough students ready to respond the teacher may judge that a little more time is needed or extra support given.
6. When the teacher is satisfied answers can be taken, there are a number of choices:  
   a) Select one student.  
   b) Select one but ask others to elaborate, comment etc.  
   c) Ask different students to give a particular part of the answer

**Application:**

- To involve whole class in the consideration of a question or problem.
- To increase individual accountability.
- To increase group teaching so that all members of the group are coached.
To increase team spirit and satisfaction.

To give support to all students in consideration of challenging questions or problems.

Numbered Heads Together’ is an excellent structure for combining Learning Partnerships into groups or teams of four. It can be used early in the development of the ‘co-operative classroom’ and as with ‘Think, Pair, Share’ offers a high degree of engagement but slightly higher order interpersonal and small group skills are needed.

The important concept of ‘wait time’ is incorporated and allows all children to develop answers. Answers will have reasons and justifications because they have been thought about and discussed. Students are more willing to take risks and suggest ideas because they have already ‘tested’ them within their group. This structure can also be combined successfully with ‘Check and Coach’. (Networked Learning Community, 2003).

5.3. Three Minute Review:

The three minute review is an activity that gives students a time to reflect on what they have gained from a lecture or discourse, and to ask questions that clarify areas that they may feel unclear about. The teacher stops at a point in the lecture and gives teams 3 minutes to review the material that has been presented, as well as address and answer questions that arise from the material. As in the three step interview, each of the five key elements of cooperative learning is incorporated into this activity. Students are allowed time to process and synthesize the material using their peer groups as a venue through which to assess the information,
ideally gaining perspective and thought provoking input from their group mates. (21st CentCoopLearning, 2014).

**5.4. Round Table Technique:**

It is a simple cooperative learning strategy that cover much content, builds team spirit.

*Steps:*

1. Teacher poses a problem with many possible answers such as “How can we show respect in our classroom?”
2. Students make a list on one piece of paper, each writing one of the possible answers and then pass the paper to the next person. The paper literally goes round the table. (Kagan, 1998)

**5.5. Think-Ink-Pair-Share:**

Think – Ink – Pair – Share is a variation of the cooperative learning strategy Think – Pair – Share, and it helps keep students actively engaged through writing. This allows them to confirm their understanding of a concept or process. Students use wait time to think about an idea or question, write down their responses, and then pair with a partner for discussion. Individuals return to what they wrote and modify their first ideas to reflect new thinking. Students can then share their reflections within a small group or with a partner.

*Steps:*

* Think: After a lecture or text reading, ask students to take a few moments to think about the information introduced to them.
• Ink: Students elaborate on the information from your lecture or the text by writing down their ideas or reflections. This elaboration can be in the form of:
  • a real-life example
  • a summarization of key concepts
  • a listing of costs and benefits or pros and cons
  • a diagram of a process

Give students a list of some ideas to get started:
  • Think of a time…
  • Give an example…
  • Give a non-example…
  • In your own words…
  • How does it connect to other things we have been learning?
  • Summarize…
  • How would you teach it to…?

• Pair: Students discuss their writing in pairs. Based on the conversation with their partner, students return to what they wrote and modify or enhance their writing.

• Share: Finally, ideas will be shared through a whole class, small group, or partner format, and students will include how their thinking changed after discussing their thoughts. (Think-Ink-Pair-Share, 2005) The Think-Ink-Pair-Share activity is an excellent prior knowledge activity that helps students to focus their thoughts on specific topic.

Students are given a question or topic and are asked to first think about what they know, and then record their ideas.
down, pair up with someone to share what they wrote. The final stage is a large group
discussion. When time is specified it becomes Timed Pair share. (Texas Education

**5.6. Formulate, Listen, Share and Create:**

This is a further variation on Think Pair Share was developed by Johnson,
Johnson and Smith (1991). It is a good strategy for use with problems or questions that
could be addressed in a variety of ways. The ‘create’ step gets students to synthesize
their ideas and come up with the best solution to the problem.

*Steps:*

2. Formulate your answers to the question
   individually.
3. Share your answer with your partner
4. Listen carefully to your partner’s answer. Note
   similarities and differences in your answers.
5. Create a new answer that incorporates the best of
   the ideas. Be prepared to present your answer if called upon. (Johnson, Johnson &
   Smith, 1998)

This design adds a little more complexity to Think Pair Share by pushing for
something specific to be created after the sharing has occurred. (Williams, 2002).

**5.7. Three Step Interview:**

It is a strategy that is effective when
students are solving problems that have no specific
right answers. Three problem solving steps are
involved in this process.
**Steps:**

1. In the beginning the teacher presents an issue or the topic of interview, about which varying opinions exist. The teacher also states the duration of the interview and provides think time.

2. A pair of students becomes interviewer and interviewee. Thus student ‘A’ interviews student ‘B’. After the interview is over the roles reverse and student ‘B’ interviews student ‘A’.

3. Pairs form groups of four or more and share their responses with the group and finally to the entire class. (Cooperative Learning Strategy, 2014)

**5.8. Peer Tutoring:**

The textbook definition of peer tutoring is "a system of instruction in which learners help each other and learn (themselves) by teaching". The key to this definition is the word ‘peer’, meaning someone with the same or a nearly equal status as the person being tutored, who, as such, is not a professional instructor. (Sonawane & Vartak, 2010)

**Steps:**

1. Establish rules for confidentiality of student progress.

2. Define and develop procedures for social skills students may need throughout peer tutoring (i.e., sharing, taking turns, using respectful language, and accepting criticism or feedback).
3. Define and develop procedures for moving into peer tutoring groups quickly and quietly.

4. Explain and model peer tutoring and allow students to practice prior to the first peer tutoring session. Consider using a prepared script for practicing interactions (Fulk & King, 2001).

5. Train students how to provide feedback for correct and incorrect peer responses, including praise.

6. Teach students how to carefully monitor their own and their partner’s progress. (Hott, Walker & Sahni, 2012)

Peer tutoring is the system of instruction in which learners help each other and learn by teaching. Tutoring schemes known variously as Peer tutoring, cross-age tutoring, youth tutoring youth, and each one teach one have used students to teach students, students to teach children, non-professional adults to teach adults and children and children to teach children. In every case of peer tutoring a professional teacher organizes the activity of the non-professionals (tutors) and they minister to the needs of the ultimate beneficiaries of the process (tutees). (Sonawane, & Vartak, 2010)

5.9. Circle the Sage:

This is a great way to address group questions.

Steps:

1. The teacher polls the class to see which students have a special knowledge to share.
2. Those students (the sages) stand up and spread out in the room. The teacher then has the rest of the classmates each surround a sage, with no two members of the same team going to the same sage.

3. The sages explain what they know while the classmates listen, ask questions and take notes.

4. All students then return to their teams. Each in turn explains what they learned. Because each one has gone to different sages, they compare notes.

5. If there is a disagreement they stand up as a team.

6. The disagreements are discussed in class and resolved. (Cooperative Learning Strategies, 2014)

5.10. Pairs Compare:

Pairs Compare is a variation of Think-Pair-Share cooperative learning teaching technique.

Steps:

1. Pairs generate ideas or answers.

2. They compare their answers with another pair.

3. Then see if working together they can come up with additional responses neither pair alone had.
Cooperative Learning Lesson Plans for Pre Service Teachers.

Paper II Sec I: Psychology of Development & Learning

Framework of the lesson note used for the study:

A total of 25 sessions were conducted and each session has a corresponding lesson plan. The content of these lesson plans was based on Paper II Section I ‘Psychology of Development and Learning’ B.Ed. Syllabus (Revised 2008).

Each lesson plan consists of the following parts, which gives a detailed description from the objectives to the evaluation of each lesson. The parts of the lesson plans are as follows:

**Lesson Summary:** It gives the focus of the lesson i.e. the subunits which will be dealt with in the lesson. The cooperative learning techniques are also mentioned here. In brief the activities expected from the students are also given.

**Objectives:** The general objective and the specific objectives of the current lesson are given under this head. The objectives related to social developmental aspect is also given.

**Required Material:** The details of the teaching aids and worksheets used for every lesson is mentioned under this head.

**Step by Step Procedure:** This gives the details of the actual activities of the teacher and the students. It consists of the following subparts:

- **Lead in:** This gives the introductory activity. These activities are based on the past experience or previous knowledge of the students.
- **Detailed study:** This is the description of the lesson dealing with the subunits mentioned in the ‘lesson summary’. Here the activities of both the students and teacher are given. The cooperative learning techniques are given in detail, starting from how the groups are made.
- **Extended Activity:** Here the evaluation procedure is described. Information of how and using which cooperative learning techniques is given.
Unit: 1.1 Meaning, Nature of Educational Psychology. (Session 1)

(Time 45 minutes)

Lesson Summary:
The lesson focuses on the history, definition and branches of Psychology and then concentrates on the meaning, nature, contribution and limitations of Educational Psychology. The cooperative learning techniques used are ‘Think Pair Share’ in both the lead in and detailed study. For the extended activity ‘Numbered Heads’ techniques is used.

Objectives:
- General Objective:
  - The student tells the meaning of Psychology, the meaning, nature, contributions and limitations of Educational Psychology subsequent to working in groups or in pairs.
- Specific Objectives:
  - The student cooperates and tells what psychology studies while working in pairs.
  - The student tells the meaning and nature of educational psychology.
  - The student works in groups to identify the contributions and limitations of educational psychology from a list of statements.
  - The student understands his or her role in the group and cooperates to complete the worksheet.

Required Material:
- LCD Projector and Laptop for showing PPT slides to students.
- Worksheet prepared by the teacher.

Step by Step Procedure:
- **Lead in:**
  - The teacher shows the slide with a picture of a classroom and asks students to describe what all the characters are doing.
  - The teacher gives half a minute for the students to think individually then discuss with their partners.
  - At random the teacher asks any pair to stand up and share their answers with the class. (Think Pair and Share).
  - The teacher asks “How were you able to describe what the characters are doing?”
  - The teacher says that psychology is the study of behaviour.
- **Detailed Study:**
  - The teacher explains and shows the slides with the history, definitions, branches and meaning of psychology.
The teacher asks following questions to the students in pairs (Think Pair and Share):
- ‘Why does psychology study animal behaviour and not only human behaviour?’
- ‘Can you name any branches of psychology?’
- ‘If psychology studies behaviour, what does educational psychology study?’
- After every question the teacher asks students to think individually at first, then discuss with their partners for a minute.
- The teacher randomly asks any pair to answer.
- The teacher discusses the answer and links it with the next questions while showing slides.

**Extended Activity:**
- The teacher divides the class into groups of six students. Then each member of a group is allotted a number from one to six, which they are instructed to remember. (Numbered Heads)
- The students are distributed the following roles for each of the group members: leader, recorder, time keeper, encourager, organiser and noise checker.
- The teacher gives the worksheets to the groups and asks the group members to identify the contributions and limitations of Educational Psychology from the given statements.
- The students are asked to label the statements as ‘C’ for contribution and ‘L’ for limitations.
- The students are given five minutes to complete the activity.
- The teacher selects the first group and calls out any number between one to six.
- The teacher asks ‘Classify the first five statements into Contributions or Limitations of Educational Psychology’ to the student allotted the number called out
- The student stands, reads out and justifies the answers from the worksheet.
- The teacher follows the same process for the rest of the group asking them to classify the next five statements.
- The members form other groups are also allowed to answer if they are different from the previous group’s answer.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher wraps up the activity by showing the contributions and limitations on the PPT slides.
- Finally the teacher concludes the class with a slide regarding the importance of educational psychology in understanding the learning process, the learning situation and the learner.
Q. Classify the following statements into contribution and limitations of Educational Psychology:

1. Understanding the Development Features of Children.
2. Studies behaviour not assess the moral worth of the behaviour.
3. Enables the Teachers to Understand the nature of Classroom Teaching.
4. To understand the Theory of individual differences.
5. Adopting Appropriate Plans for Effective Learning.
6. An individual’s behaviour cannot be controlled.
7. A knowledge about Mental Health.
9. Does not provide readymade solutions.
10. It is not an exact science
11. Evaluation of Learning Possible.
12. Encourages Research about Classroom instructions.
13. Better at telling, ‘what not to do than it is at telling what to do’
15. It gives evasive answers
17. Understanding Group Dynamics.
18. Uses answers, ‘depends on the situation or on the learner’.
21. Intensity of emotions cannot be directly compared
22. Does not decide aims of education but helps telling whether the aim is attainable or intangible.
23. Emphasizes no Rigid Time-Table.
24. Promotes ‘teacher centered’ to ‘student centered’ learning
25. Highlights importance of Co curricular activities in overall development of the learner.
26. It is a Positive Science, Not a normative science like Philosophy and ethics.
27. The principle of individual differences poses a number of limitations.
28. Use of Innovations: programmed instructions, discussion method etc.
29. Production of Textbooks.
30. Discovers techniques to help attain the goal.
Work Sheet for the Teacher with Answers
Unit 1.1 Meaning and Nature of Educational Psychology:

Date:

Q. Classify the statements into the contribution and limitations of Educational Psychology:

1. Understanding the Development Features of Children. (C)
2. Studies behaviour not assess the moral worth of the behaviour. (L)
3. Enables the Teachers to Understand the nature of Classroom Teaching. (C)
4. To understand the Theory of individual differences. (C)
5. Adopting Appropriate Plans for Effective Learning. (C)

6. An individual’s behaviour cannot be controlled. (L)
7. A knowledge about Mental Health. (C)
8. Helps in Curriculum Construction. (C)
9. Does not provide ready made solutions. (L)
10. It is not an exact science (L)

11. Evaluation of Learning Possible. (C)
12. Encourages Research about Classroom instructions. (C)
13. Better at telling, ‘what not to do than it is at telling what to do’ (L)
14. Organization of Guidance programmes. (C)
15. It gives evasive answers (L)

16. Development of a Positive Attitude by the Teachers. (C)
17. Understanding Group Dynamics. (C)
18. Uses answers, ‘depends on the situation or on the learner’. (L)
19. Activity-discipline, ‘self-discipline’. Internal not external. (C)
20. Use of Audio-Visual Aids. (C)

21. Intensity of emotions cannot be directly compared (L)
22. Does not decide aims of education but helps telling whether the aim is attainable or intangible. (L)
23. Emphasizes no Rigid Time-Table. (C)
24. Promotes ‘teacher centered’ to ‘student centered’ learning (C)
25. Highlights importance of Co curricular activities in overall development of the learner. (C)

26. It is a Positive Science, not a normative science like Philosophy and ethics. (L)
27. The principle of individual differences poses a number of limitations. (L)
28. Use of Innovations: programmed instructions, discussion method etc. (C)
29. Production of Textbooks. (C)
30. Discovers techniques to help attain the goal. (C)
1.1 Meaning & Nature of Educational Psychology

Paper II Section I
Psychology of Development and Learning.

History of Psychology:
- Ancient ages: Branch of Philosophy – Mental Philosophy.
- Later scholars tried to adopt a scientific approach to the subject. Resulted in different definitions.

Definitions of Psychology:
- Psychology is the science of soul:
  - Greek words: psyche = soul + logos= rational study.
  - Difficult to locate it in the human body. Kant et al rejected it.
- Psychology is the science of Mind:
  - As vague and mysterious like soul. Watson et al rejected it.
- Psychology is the science of Consciousness:
  - Rejected due to its limited scope.
  - Sigmund Freud emphasized on unconscious and subconscious aspects.
  - Conscious mind: Keyboard and monitor
  - Subconscious mind: STM (RAM)
  - Unconscious mind: LTM (Hard drive)

Definitions of Psychology:
- William James summarized:
  “Psychology first lost its soul, then it lost its mind and finally it lost its consciousness.”

Immanuel Kant
James B. Watson
Sigmund Freud
William James
Psychology in the Modern Times:

- ‘Psychology is the science of Human as well as animal behaviour.’ - Watson.
- ‘Briefly defined Psychology is the study of human behaviour and human relationships.’ - Crow and Crow.
- Thus Psychology is:
  - a study of behaviour.
  - the study of the mind – Conscious, unconscious & subconscious.
  - a science.

Think-Pair-Share

Name a few branches of Psychology

Branches of Psychology:

- Child Psychology
- Human Psychology
- Animal Psychology
- Individual Psychology
- General Psychology
- Applied Psychology:
  - Educational
  - Industrial
  - Social
  - Clinical

Think-Pair-Share

If Psychology studies behaviour, what does educational psychology study?

What is Educational Psychology:

- ‘It is that branch of psychology that deals with teaching and learning’ - C.E. Skinner.
- ‘Educational Psychology is that special branch of psychology, concerned with the nature, conditions, outcomes and evaluation of school learning and retention’ – D.P. Ausubel.

Nature of Educational Psychology:

- Applied branch of psychology to study the behaviour and experiences of children using principles of psychology.
- Studies children’s behaviour influenced by various factors in the school.
- Suggests ways and means to modify children’s behaviour.
Nature of Educational Psychology:
- Concerned with problems in school & plans for sound education of children.
- Helps teachers solve classroom related problems.
- Employs scientific approach to solve these problems.
- Not a perfect science as behaviour is more variable and less reliable.

Contribution to Theory of Education:
- Understanding the Development Features of Children.
- Enables the Teachers to Understand the nature of Classroom Teaching.
- To understand the Theory of individual differences.
- Adopting Appropriate Plans for Effective Learning.
- A knowledge about Mental Health.
- Curriculum Construction.

Contribution to Practice of Education:
- Problem of Discipline:
  - Activity-discipline, 'self-discipline'. Internal not external.
- Use of Audio- Visual Aids.
- No Rigid Time-Table.
- Democratic Administration:
  - ‘teacher centered’ to ‘student centered’
- Co curricular activities.
- Use of Innovations: programmed instructions, discussion method etc.
- Production of Textbooks.
Limitations Of Educational Psychology:

• It is a Positive Science, Not a normative science like Philosophy and ethics.
  -- Does not decide aims of education.
  -- Helps telling whether the aim is attainable or intangible.
  -- Discovers techniques to help attain the goal.
  -- Studies behaviour not assess the moral worth of the behaviour.

Limitations Of Educational Psychology:

• The principle of individual differences poses a number of limitations.
• Does not provide ready made solutions.
• It is not an exact science
• Intensity of emotions cannot be directly compared
• An individual’s behaviour cannot be controlled.

Limitations Of Educational Psychology:

• It gives evasive answers
  -- Better at telling, ‘what not to do than it is at telling what to do’
  -- Uses answers, ‘depends on the situation or on the learner’.

Conclusion:

Its function is to promote greater understanding of the learning process, of the learning situation and of the learner.
Unit: 1.2 Methods of Studying Human Behaviour (Introspection and Observation)  
(Session 2)  
(Time 45+45 minutes)

Lesson Summary:
The lesson focuses on two out of four methods of studying human behaviour, namely Introspection and Observation. This lesson is based on Educational Psychology using the techniques of ‘Three minutes review’, ‘Numbered Heads together’ and ‘Think-Pair-Share’ techniques of Cooperative Learning. Students share and discuss their ideas while working in the above mentioned techniques.

Objectives:

- General Objective:
  - The student tells the characteristics, merits and limitations of Introspection and Observation methods of studying human behaviour while working in groups or in pairs.

- Specific Objectives:
  - The student tells the type of method of studying human behaviour while solving puzzles in groups or pairs.
  - The student tells the characteristics of Introspection method and Observation method.
  - The student works in groups or pairs and compares the two methods of studying psychology and tells each one’s merits and limitations.
  - The student identifies the methods in a work sheet consisting of mixed characteristics of both the methods while working in a group.
  - The student understands his/her role in the respective group and cooperates in the group to give answers.

Required Material:
- Laptop and LCD Projector to show PPT slides for students.
- Worksheet with the unlabeled characteristics of both the methods of studying human behaviour.

Step by Step Procedure:

- Lead in:
  - The teacher asks a student to give a three minute review of the previous lesson by asking questions. (Three minute review)
  - “What does Psychology study?”
  - “What does Educational Psychology study?”
  - “What are the merits and limitations of Educational Psychology?”
○ **Detailed Study:**
- The teacher shows slides with the different methods of studying human behaviour.
- The teacher divides the class into groups of 5 or 6 and assigns roles to each member as a leader, time keeper, recorder, encourager, noise checker and summarizer. (Numbered Heads together)
- The teacher shows slides to the group with various scenarios for each group.
- The teacher asks each group questions: ‘Describe your thoughts if the given event occurs in your life. Write down after discussing with your group members in two minutes, how you will plan to deal with the problem.”
- The teacher asks a student to repeat the question to verify if the students have understood the instructions and starts the time.
- The teacher moves around the classroom and monitors the group work.
- After 2 minutes the teacher asks the leader or the summarizer of each group to read out their responses.
- The students are told that they engaged in introspection, which is one of the methods of studying human behaviour.
- The teacher shows a slide with the history of Introspection method and explains briefly.
- A number between 1 to 5 or 6 is assigned to each member of a particular group. So every student will have a number in each group. For e.g. a student from a group will be given a number “4”.
- The teacher changes the roles of the students and asks the students to discuss in the same groups and write down at least three merits and three limitations of introspection within 4 minutes.
- The teacher then at random calls out any number from 1 to 5 or 6 while indicating which group to read out their answers.
- The teacher asks if any other groups have different answers and share it with the class
- The teacher shows the slide with the merits asks the students to write down the merits and limitations in their books.
- The teacher divides the class into pairs and then shows slides with ‘Hocus Focus’ puzzle and asks students in each pair to think individually about the difference between the two pictures and then discuss with their respective pairs while noting down the differences in two minutes.
- The pair which finds out six differences the fastest is asked to share their answers in the class.(Think-Pair-Share)
- The teacher asks, “Which method did you use to find out the differences between the two pictures?”
- The student answers “Observation method”.
- The teacher shows slides about the steps and types of observation method.
- The teacher then asks each pair to individually think about at least three merits and three limitations of observation method, discuss with their respective partners and write down the points in three minutes.(Think Pair Share)
- The teacher moves around the classroom and monitors the pair work.
- After three minutes the teacher at random chooses a pair and asks both the members to share their points.
- The teacher asks if any other pairs have different answers and to share them with the classroom.
- The teacher discusses with the students and makes students write down the merits and limitations from the slide.

○ Extended Activity:
- The teacher distributes a sheet with unlabeled characteristics of Introspection and Observation method and asks the students to work in their original groups.
- The teacher asks ‘Write the name of the method against the appropriate characteristic with in two minutes.’
- The teacher starts the time and monitors the group work.
- The teacher then uses the ‘Numbered Heads Together’ and asks each group for the correct answers.
- All the students are given 5 minutes to discuss the following questions:
  ➢ How they worked as a group?
  ➢ What activities helped them to achieve their group goal?
  ➢ What things should they avoid doing in the future activities?
- The teacher concludes the session.
Work Sheet for Students
Unit 1.2 Methods of Studying Human Behaviour:

Group No:

Q. Classify the statements as characteristics of Introspection or Observation:

1. Done when one studies others behaviour by carefully watching their behaviour.
2. Means look into one self
3. Does not require any apparatus or material
4. Studies overt behaviour.
5. Helps study the child under various controlled conditions.
6. Person’s mind is the laboratory
7. Easiest method. Always available
8. Can be conducted anywhere any time
9. Sometimes children become conscious and this creates a problem.
10. Ineffective for children, infants and mentally challenged persons
11. Is expensive as we can judge the mental process of one individual only.
Work Sheet for Teacher  
Unit 1.2 Methods of Studying Human Behaviour:  

Date:

1. Done when one studies others behaviour by carefully watching their behaviour.  
   (O)

2. Means look into one self (I)

3. Does not require any apparatus or material (I)

4. Studies overt behaviour. (O)

5. Helps study the child under various controlled conditions. (O)

6. Person’s mind is the laboratory (I)

7. Easiest method. Always available (I)

8. Can be conducted anywhere any time (I)

9. Sometimes children become conscious and this creates a problem. (O)

10. Ineffective for children, infants and mentally challenged persons (I)

11. Is expensive as we can judge the mental process of one individual only.(I)
1.2 (a) Methods Of Studying Human Behaviour

Methods can be classified into:

- Subjective Methods:
  - Introspection Method
  - Anecdotal Method

- Objective Methods:
  - Observation
  - Experimental
  - Case History/Study
  - Psycho-analytic
  - Clinical
  - Comparative
  - Interview
  - Test
  - Statistical
  - Questionnaire

Methods for studying:

- Subjective Methods: Introspection Method
- Objective Methods:
  - Observation Method
  - Experimental Method
  - Case Study Method

Numbered Heads Together

Describe your thoughts when

Scenarios: Describe your thoughts when:

- You are a std. VI teacher and you find that after the mid term exams your students have not performed well.
- One day you meet your classmate and he/she ignores you and passes you by without an acknowledgement.

Scenarios: Describe your thoughts when:

- You are a teacher in a school and one day the principal, who is otherwise good natured, talks to you very rudely.
- You are in std IX and you are good in Mathematics. However in the unit test you get very less marks.
Introspection Method:
- Advocated by Wilhelm Wundt (1st Psychology Lab in Leipzig 1879).
- 'Intro'- within & 'spection'- looking. Look into oneself.
- Requires complete concentration to look into one’s inner mental working.
- It is self analysis according to Woodworth.

Numbered Heads Together
Write down five merits and five limitations of introspection.

Introspection Method: Merits-
- Easiest method. Always available
- Does not require any apparatus or material
- Person’s mind is the laboratory

Introspection Method: Merits-
- Can be conducted anywhere any time
- One can improve one’s behaviour through this method.
- Useful when other methods can’t be used.

Introspection Method: Limitations-
- Actual thoughts may not be revealed. Large part of the mind is not open to introspection
- Ineffective for children, infants and mentally challenged persons
- Suffers from subjectivity in interpretation. Thus unreliable.
- Can’t check results or reach universal generalization.

Introspection Method: Limitations-
- Mental processes change very quickly thus difficult to introspect
- Is expensive as we can judge the mental process of one individual only.
- Can be used only by highly developed trained minds.
Think-Pair-Share
Hocus Focus

Observation Method:
- Done when one studies others' behaviour by carefully watching their behaviour.
- Studies overt behaviour
- Steps: Observation starts- carefully noted down- interpreted later – finally arrive at results.

Observation Method: Types-
- Natural - in natural environment
- Incidental - unplanned, frequently done by trs.
- Participant – observer becomes a member of the group being observed. So the subjects are not aware of the observer

Observation Method: Types-
- Systematic-
  - planned and controlled.
  - Done by trained psychologists using devices to make it more objective, reliable and exact
  - 2 sub types: Situational analysis particular situation or problem, Time sampling (particular type of behaviour observed from time to time.

Think-Pair-Share
Write down three merits and three limitations of Observation.
Observation Method: Merits -
- Important in the field of educational psychology
- Helps study the child under various controlled conditions
- Helps to judge correctly
- Special value in studying problem children

Observation Method: Limitations-
- May not be always possible to record everything
- Only trained psychologists can organize controlled observation.
- Sometimes children become conscious of controlled observation & this creates a problem

Numbered Heads Together
Classify the statements as characteristics of Introspection (I) or Observation (O):
1. Done when one studies others behaviour by carefully watching their behaviour. (O)
2. Means look into one self (I)
3. Does not require any apparatus or material (I)
4. Studies overt behaviour. (O)
5. Helps study the child under various controlled conditions. (O)
6. Person’s mind is the laboratory (I)
7. Easiest method. Always available (I)
8. Can be conducted anywhere any time (I)
9. Sometimes children become conscious and this creates a problem. (O)
10. Ineffective for children, infants and mentally challenged persons (I)
11. Is expensive as we can judge the mental process of one individual only (I)

Thank You
Unit 1.2 Methods of Studying Human Behaviour (Case Study and Experimental method)

(Session 3)
(Time 45+45 minutes)

Lesson Summary:
The focus of the lesson is on the remaining two methods of studying human behaviour, i.e. Case study and Experimental method. In the previous lesson the students have learnt about the Introspection and Observation methods. The cooperative learning techniques used are ‘Three minutes review’, ‘Timed Pair Share’, ‘Round Table’, ‘Think-Pair-Share’ and ‘Think Ink Pair Share’.

Objectives:

- **General Objective:**
  - The student works in groups or pairs and tells the characteristics, merits and limitations of Case Study and Experimental methods of studying human behaviour.

- **Specific Objectives:**
  - The student identifies the method of studying human behaviour while participating in activities given in groups or pairs.
  - The student tells the characteristics of Case Study and Experimental method of studying human behaviour.
  - The student works in pairs and classifies the examples into the different types of case study.
  - The student identifies the main elements of Experimental method through discussions with group members.
  - The student tells the merits and limitations of each method after working in groups.
  - The student cooperates with the group members to give the answers and understands his or her role in their respective groups.

Required Material:
- LCD Projector and Laptop for showing PPT slides for students.

Step by Step Procedure:

- **Lead in:**
  - The teacher asks questions and asks a student to give a three minute review of the previously learnt methods. (Three minute review).
  - “Name the methods of studying human behaviour learnt in the previous lecture.”
  - “Give any three main characteristics of Introspection method.”
  - “Give any three merits and limitations of Introspection method.”
  - “State any three main features of Observation method.”
  - “Tell any three merits and limitations of Observation method.”
Detailed Study:
- The teacher shows the slides with the characteristics of Experimental method of studying human behaviour.
- The teacher explains the main features of the Experimental method.
- The students are then shown a slide with examples of experimental method problems.
- The teacher asks students to think for thirty seconds individually and then discuss with their partners and write down the ‘experimental group’, ‘control group’, ‘independent variable and the dependent variable’ for the given four examples. The students are given four minutes to complete the activity. (Timed Pair Share).
- The teacher selects any pair in the class randomly and asks them to answer.
- The teacher shows the procedure of the Experimental method on a PPT slide.
- The teacher then divides the class into groups of six members. The groups are made according to their admission numbers.
- Each group is asked to discuss and write down four merits and four limitations of the Experimental method.
- A piece of paper is circulated amongst the group members in each group. Each member writes a point and reads it aloud. The group members discuss all the points written and organise the answer within their respective groups. The students are given five minutes to complete the activity. (Round table technique).
- A group is selected randomly and asked to read out their points.
- This is followed by a discussion with other groups regarding points not covered by the group selected by the teacher.
- The students are asked to note down the merits and limitations identified through the activity.
- The teacher then shows the slides with a few of the merits and limitations and summarizes the discussion.
- The teacher divides the class into pairs and asks each pair to write down a few questions that a doctor asks when one visits the clinic for the first time. The teacher first instructs the student to think about the questions individually for a few seconds and then discuss it with their partners. One minute is given to write down the questions. (Think-Pair-Share)
- The teacher selects any pair at random and asks them to read out the questions they have written down.
- The teacher then explains that in the Case Study method similar questions are asked and are recorded.
- The teacher shows the slides with characteristics, procedure and types of Case Study method.
- The teacher shows a slide with examples of case study and asks the pairs to classify them into either ‘Longitudinal or Cross sectional Case Study method’. The teacher gives one minute for the students to complete the activity. (Think-Pair-Share)
- The teacher at random calls out a pair and asks them to answer.
- The teacher then asks students to again work in their previously made groups using the ‘Round table technique’ to list down three merits and three limitations of the Case Study method of study.
- The teacher asks students to write down the points obtained through the activity.
- After the points written the teacher shows the slides with the merits and limitations of the Case Study method to summarise the topic.
- All the students are given 5 minutes to discuss the following questions:
  o How they worked as a group?
  o What activities helped them to achieve their group goal?
  o What things should they avoid doing in the future activities?

  o **Extended Activity:**
  - The students are asked to work in pairs and write down any four differences between Case Study method and Experimental method of studying human behaviour.
  - After three minutes the teacher selects any pair and asks them to answer. (Think Ink Pair Share).
  - This is followed by a short discussion and the teacher ends the lecture.
1.2 (b) Methods Of Studying Human Behaviour

Paper II Section I
Psychology of Development and Learning.

Experimental Method:
- Most dependable as it is conducted in controlled conditions in a laboratory
- Minimum 2 groups- Experimental group & Controlled group
- Both have to be as similar/identical as possible
- The variable under study is applied to the experimental group not on the controlled group- Independent variable

Experimental Method:
- The variable on which the independent variable acts and shows the outcome is called the dependent variable.
- The intensity of the dependent variable depends on the independent variable
- The result indicates if the two variables are co-related or not.

Timed Pair Share
Write down the following for the given examples:
1. experimental group,
2. control group,
3. independent variable
4. dependent variable

Experimental Method: Examples-
- What is the effect of incentives on achievement of children?
- Which is the better method: whole/part?
- Does smoking lower mental efficiency?
- How does job satisfaction affect the performance of teachers in the classroom?

Experimental Method: Steps
1. Select the topic (fatigue, memory)
2. Select the sample (win the confidence of the sample)
3. Arrange material in proper order
4. Carefully note the reaction of the sample
5. Analysis of the data obtained
6. Arrive at the final finding
Round Table Technique

Write down four merits and four limitations of Experimental Method

Experimental Method: Merits-
- Has a scientific approach
- Due to this method psychology has become a science
- Can study mental processes in controlled conditions one by one
- Come to know about the child better after analyzing the data
- Repetition of the experiment can be done to find the reliability of the findings

Experimental Method: Limitations-
- All conditions cannot be controlled properly
- Lack of proper rapport between child & experimenter can give erroneous results
- Atmosphere in the lab is unnatural & child’s behaviour can be unnatural too
- Not economical as it requires apparatus
- Requires trained staff, which is not available

Case Study:
- Normally used to study a single person with abnormal behaviour- clinical case study/ having difficulty in achieving milestone called developmental case study
- Used to study, diagnose problems, suggest therapeutic measures/ rehabilitation

Think-Pair-Share

Write down a few questions that a doctor asks when one visits the clinic for the first time.

Case Study: Procedure
1. Collect personal information from clients, parents, teachers, family members/ friends through interview/ questionnaire
2. Conduct tests to measure physical, mental (IQ) development, social, emotional development, achievement, aptitude, ability, interest and hobbies
3. Suggest remedies or solutions to overcome maladjusted behaviour
4. Development case study:
   - **Longitudinal** - client studied from birth to later stage to check the ages when mile stones are reached
   - **Cross sectional** - client at any stage of life is studied to see when certain mile stones are reached.

**Think-Pair-Share : Identify the Examples**
- Little Judy is throwing temper tantrums, not eating her meal crying all night and refusing to go to school
- Daniel who is otherwise a fine young boy is caught stealing from a shop

**Round Table Technique:**
List down three merits and three limitations of the Case Study method of study.

**Case Study: Merits-**
- Special features in individual’s behaviour can be studied
- Is diagnostic in nature so suggests remedies to solve maladjustments
- Gives ideas for further investigation through experimental method
- Has given information about personality traits & motivation

**Case Study: Limitations-**
- Not economical - time and money
- As data is collected from various sources the information may not be reliable
- The results may be more subjective than objective

**Think Ink Pair Share:**
Write down any four differences between Case Study method and Experimental method of studying human behaviour.

Thank you
Unit: 1.3 Uses of Psychology to the Teacher.

(Session 4)
(Time 45 minutes)

**Lesson Summary:**

The focus of the lesson is the different uses of psychology to the teacher at both professional and personal level. The uses have been categorized into seven areas of use of psychology in: the development of the learner, the learning situation, evaluation, teaching method, text book and curriculum, teacher’s personality and school climate. The cooperative learning techniques used are ‘Three minute review’ for the Lead In activity. ‘Numbered Heads Together’ is used for the Detailed Study. For the extended activity ‘Formulate, Listen, Share and Create’ is utilized.

**Objectives:**

- **General Objectives:**
  - The student tells the different uses of psychology to teachers after working in pairs and groups.
- **Specific Objectives:**
  - The student cooperates with his/ her respective groups and classifies the uses into the seven areas given by the teacher.
  - The student works in pairs and draws a concept map showing the uses of psychology to the teacher.
  - The student understands his/her role in the group and cooperates to answer the questions.

**Required Materials:**

- LCD projector and Laptop for showing Power Point Presentation slides to the students.
- Worksheet prepared by the teacher.

**Step by Step Procedure:**

- **Lead in:**
  - The teacher asks questions and asks a student to give a three minute review based on the previous lecture (Unit 1.1) (Three minute review).
  - “What type of a science is Educational Psychology?”
  - “Define Educational Psychology.”
  - “What does Educational Psychology study?”
  - The teacher shows the slides with the answer after the student’s review.

- **Detailed Study:**
  - The teacher shows the slide showing a diagram with the seven areas into which the uses of Psychology for a teacher can be categorised.
  - The teacher divides the class into groups of six students.
  - Each member of all the groups is allotted a number between one to six.
- The teacher allocates the roles of a leader, time keeper, silencer, recorder, checker and summarizer to all the groups.
- The teacher distributes worksheets to all the groups with different uses of Psychology for teachers.
- The teacher asks the students to work with their group members and categories the uses into the seven areas shown on the PPT slide. (Numbered Heads Together)
- The teacher gives ten minutes to complete the activity.
- After the students complete the activity the teacher selects any number from one to six and asks the student allotted the number to read out the uses under the first area i.e. ‘Development of the Learner’.
- In the same way the teacher calls out any allotted number for all the groups to give the answer for the rest of the six areas.
- The teacher conducts a discussion if the answers differ from one group to the other.
- The teacher shows the PPT slides with the different uses according to the seven areas.

- **Extended Activity:**
  - The teacher shows a format of a Concept map with blank boxes
  - The teacher asks student to think individually about the uses which can be summarized for each area in the boxes.
  - The teacher asks the students to work in triads and fill in the concept map with the uses of psychology for teachers. (Formulate, Listen, Share and Create).
  - The teacher asks any pair to explain their concept map.
  - All the students are given 5 minutes to discuss the following questions:
    - How they worked as a group?
    - What activities helped them to achieve their group goal?
    - What things should they avoid doing in the future activities?
  - The teacher concludes the lesson by showing a PPT slide with a comprehensive statement related to the use of psychology for teachers.
Work Sheet for Students
Unit: 1.3 Uses of Psychology to the Teacher.

Date:

Group No:

Q. Categorize the uses into the seven areas: the development of the learner, the learning situation, evaluation, teaching method, text book and curriculum, teacher’s personality and school climate:

1. It is emphasized that curriculum should be flexible, modern, interesting application & activity based.
2. Knowledge of various milestones reached at childhood and adolescence help to identify & problems of students.
3. Use tools of evaluation for continuous & comprehensive evaluation.
4. Adequate facilities & free environment motivates students to attend regularly.
5. Educational Psychology makes teachers aware of - activity based teaching (use correct teaching aids, teaching methods) makes learning effective.
6. Helps teachers identify attitude, aptitude, interest, potentials and intelligence of students.
7. Schools should provide good facilities- libraries, laboratories.
8. Same methods not effective in teaching all subjects.
   a. E. g.: English- Communicative method
   b. Geography- Regional, Excursion and Journey method.
9. Before teaching the Tr. must understand individual differences among students. (physical, emotional, social & mental development).
10. While preparing teaching aids- perception of figure & ground.
11. Never use ‘labeling’- causes either over confidence or inferiority complex
12. Different methods of teaching are useful for students of different age groups.
13. Have co curricular& extracurricular activities acc. to the need of the students.
14. Helps understand class room situation through knowledge of ‘Group Dynamics’
15. Helps teachers deal with student’s problems appropriately, as it helps in understanding them.
16. Characteristics of a good textbook- attractive, simple & lucid language, legible, affordable, sturdy, having content acc. to the student’s level.
17. This helps teacher become more effective. Helps teachers improve professionally.
18. The environment of the school should be healthy, conducive not stressful.
Work Sheet with answers
Unit: 1.3 Uses of Psychology to the Teacher.

Date:

Group No:

Q. Categorize the uses into the seven areas: the development of the learner, the learning situation, evaluation, teaching method, text book and curriculum, teacher’s personality and school climate:

1. It is emphasized that curriculum should be flexible, modern, interesting application & activity based. (Cur TB)
2. Knowledge of various milestones reached at childhood and adolescence help to identify & problems of students. (D L)
3. Use tools of evaluation for continuous & comprehensive evaluation.(EV)
4. Adequate facilities & free environment motivates students to attend regularly. (School climate)
5. Educational Psychology makes teachers aware- activity based teaching (use correct teaching aids, teaching methods) makes learning effective.(L S)
6. Helps teachers identify attitude, aptitude, interest, potentials and intelligence of students. (Tr Per)
7. Schools should provide good facilities- libraries, laboratories. (School Climate)
8. Same methods not effective in teaching all subjects.(TM)
   a. E. g.: English- Communicative method
   b. Geography- Regional, Excursion and Journey method.
9. Before teaching the Tr. must understand individual differences among students. (physical, emotional, social & mental development). (D L)
10. While preparing teaching aids- perception of figure & ground.(L S)
11. Never use ‘labeling’ - causes either over confidence or inferiority complex (EV)
12. Different methods are useful for students of different age groups.(TM)
13. Have co-curricular & extra-curricular activities acc. to the need of the students. (Cur TB)
14. Helps understand class room situation through knowledge of ‘Group Dynamics’(L S)
15. Helps teachers deal with student’s problems appropriately, as it helps in understanding them. (Tr Per)
16. Characteristics of a good textbook- attractive, simple & lucid language, legible, affordable, sturdy, having content acc. to the student’s level. (Cur TB)
17. This helps teacher become more effective. Helps teachers improve professionally. (Tr Per)
18. The environment of the school should be healthy, conducive not stressful. (Sc Climate)
Q. Categorize the uses into the seven areas: the development of the learner, the learning situation, evaluation, teaching method, text book and curriculum, teacher’s personality and school climate:

**Development of the Learner:**
1. Before teaching the Tr. must understand individual differences among students. (physical, emotional, social & mental development). (D L)
2. Knowledge of various milestones reached at childhood and adolescence help to identify & problems of students. (D L)

**Learning Situation:**
3. Educational Psychology makes teachers aware- activity based teaching (use correct teaching aids, teaching methods) makes learning effective.(L S)
4. While preparing teaching aids- perception of figure & ground.(L S)
5. Helps understand class room situation through knowledge of ‘Group Dynamics’(L S)

**Evaluation:**
6. Use tools of evaluation for continuous & comprehensive evaluation.(EV)
7. Never use ‘labeling’- causes either over confidence or inferiority complex (EV)

**Teaching Method:**
8. Same methods not effective in teaching all subjects.(TM)
   a. E. g.: English- Communicative method (TM)
   b. Geography- Regional, Excursion and Journey method.
9. Different methods are useful for students of different age groups.(TM)

**Textbook and Curriculum:**
10. It is emphasized that curriculum should be flexible, modern, interesting application & activity based. (Cur TB)
11. Have co curricular& extracurricular activities acc. to the need of the students. (Cur TB)
12. Characteristics of a good textbook- attractive, simple & lucid language, legible, affordable, sturdy, having content acc. to the student’s level. (Cur TB)

**Teacher’s Personality:**
13. Helps teachers identify attitude, aptitude, interest, potentials and intelligence of students. (Tr Per)
14. Helps teachers deal with student’s problems appropriately, as it helps in understanding them. (Tr Per)
15. This helps teacher become more effective. Helps teachers improve professionally. (Tr Per)

**School Climate:**
16. The environment of the school should be healthy, conducive not stressful. (Sc Climate)
17. Schools should provide good facilities- libraries, laboratories.(School Climate)
18. Adequate facilities & free environment motivates students to attend regularly. (School climate)
1.3 Use of Psychology to the Teacher

Paper II Section I
Psychology of Development and Learning.

Introduction:

- Educational Psychology:
  - is not a normative science, but a positive science.
  - is an applied branch of Psychology

Psychology helps teachers in the following areas:

- Development of the learner
- The learning situation
- Evaluation
- Teacher's Personality
- Textbook & Curriculum
- School Climate
- Teaching methods
- Uses of Psychology for teachers

Uses of Educational Psychology:

- Personal
- Professional

helpful for teachers at 2 levels

Numbered Heads Together:

- Categories the uses into the seven areas:
  1. the development of the learner
  2. the learning situation
  3. evaluation
  4. teaching method
  5. text book and curriculum
  6. teacher’s personality
  7. School climate
1. Development of the Learner:
- Before teaching the Tr. must understand individual differences among students. (physical, emotional, social & mental development).
- Knowledge of various milestones reached at childhood and adolescence help to identify & problems of students.
- Concept of ‘Child centered learning’ given by educational psychology.

2. The Learning Situation:
- Edu. Psy. makes trs. aware- activity based teaching (use correct teaching aids, teaching methods) makes learning effective.
- While preparing teaching aids- perception of figure & ground.
- Helps understand class room situation through knowledge of ‘Group Dynamics’
- Through ‘Guidance and Counselling’ trs. can inculcate good study habits.

3. Evaluation:
- Knowledge of objectives helps determine learning experience and evaluation. (Triangle of Evaluation)
- Use tools of evaluation for continuous & comprehensive evaluation.
- Never use ‘labeling’- causes either over confidence or inferiority complex
  - Both hamper effective learning

4. Teaching Method:
- Same methods not effective in teaching all subjects.
  - E. g.: English- Communicative method
  - Geography- Regional, Excursion and Journey method.
- Different methods are useful for students of different age groups.

5. Textbook and Curriculum
- It is emphasized that curriculum should be flexible, modern, interesting application & activity based.
- Have co curricular & extra curricular activities acc. to the need of the students.
- Textbook- attractive, simple & lucid language, legible, affordable, sturdy, having content acc. to the student’s level.

6. Teacher’s Personality:
- Helps teachers identify attitude, aptitude, interest, potentials and intelligence of students.
- Helps teachers deal with student’s problems appropriately, as it helps in understanding them.
- This helps teacher become more effective. Help professionally.
7. School Climate:
- Healthy, conducive not stressful.
- Good facilities - libraries, laboratories.
- Adequate facilities & free environment motivates students to attend regularly.

Pair Work
Complete the diagram given below:

Conclusion:
- Thus Psychology applied to education helps in developing some of the **insights, skills & attitudes** that teachers need to solve their professional problems effectively and make the **teaching learning process effective**.
Unit 2.1 a: Growth and Development: Principles of Growth and Development.

(Session 5)
(Time 45 minutes)

Lesson Summary:
The lesson focuses on the principles of Growth and Development. There are eleven principles of growth and development. The cooperative learning techniques used are ‘Three minute review’ for the Lead In activity. For the Detailed study ‘Think-Pair-Share’ technique is used. ‘Numbered Heads Together’ is used during the Extended Activity.

Objectives:
- General Objectives:
  - The student tells the principles of growth and development while working in pairs.
- Specific Objectives:
  - The student cooperates with his/her respective groups and tells the examples for each principle of growth and development.
  - The student understands his/her role in the groups and cooperates to answer the questions.

Required Materials:
- LCD projector and Laptop for showing Power Point Presentation slides to the students.

Step by Step Procedure:
- Lead in:
  - The teacher asks a student to give a three minute review based on the previous lecture related to the differences between growth and development conducted by a peer student teacher. (Three minute review).
  - The teacher shows the slides with the answer after the student’s review.

- Detail Study:
  - The teacher shows the slide showing a diagram regarding the aspects of growth and development.
  - The teacher discusses the principles of growth and development and asks the following questions to students in pairs (Think Pair and Share):
    - ‘What do you mean by Principle of continuity’?
    - ‘How does a child learn a language? (Principle of Uniformity of Pattern)
    - ‘How can we predict development?’
    - ‘Which are the areas of development?’ (Principle of Inter relation)
    - ‘Explain how development is a joint product of heredity and environment.’
  - The teacher asks students to think first individually, then gives them a minute to discuss with their partners and randomly asks any pair to answer.
- The teacher discusses the answer and links it with the next questions while showing slides.
- The teacher discusses all the principles of growth and development.

○ **Extended Activity:**

- The teacher divides the class into groups of six students. Then each member of a group is allotted a number from one to six, which they are instructed to remember. (Numbered Heads Together)
- The students are distributed the following roles for each of the group members: leader, recorder, time keeper, encourager, organiser and noise checker.
- The groups are given ten minutes to write down two examples for each principle.
- The teacher selects any group and calls out any number between one to six. The student is asked to give examples of the first two principles.
- The teacher then asks other group members to share their examples, if they are different from the one mentioned by the first group.
- The students are asked to note down all the examples.
- In the same way all the examples of the remaining principles are discussed by the rest of the groups.
- At the end of the activity all the students are given 5 minutes to discuss the following questions:
  ○ How they worked as a group?
  ○ What activities helped them to achieve their group goal?
  ○ What things should they avoid doing in the future activities?
- Finally the teacher concludes the class with the slide with the references for the topic.
2.1 (a) Growth and Development

Paper II Section I
Psychology of Development and Learning.

Growth:
- Is an irreversible increase in size, length, height and weight of an individual.
- It has purely physical sense.
- It is quantitative.

Development:
- Overall change in shape, form or structure resulting in improving working or functioning of an individual is known as development.
- It is qualitative.

### Growth vs. Development

<table>
<thead>
<tr>
<th>Growth</th>
<th>Development</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irreversible changes in size, length etc.</td>
<td>Overall changes in shape etc. for improving working/functioning</td>
</tr>
<tr>
<td>Quantitative</td>
<td>Qualitative</td>
</tr>
<tr>
<td>Is a part of the development process</td>
<td>Is wider and comprehensive. Refers to overall changes.</td>
</tr>
<tr>
<td>Changes in a particular aspect of the body of the organism</td>
<td>Changes in the organism as a whole not list the changes in parts.</td>
</tr>
</tbody>
</table>

### Aspects of Growth & Development:

- **Emotional**
- **Physical**
- **Mental**
- **Social**

Growth:
- Are subject to measure and observable in nature.
- Stops when maturity is attained.
- May/may not bring about development.
- Does not bring in mental/social development.

Development:
- Difficult to measure directly. Are assessed through keen observation in behavioural situations.
- Continuous process from womb to tomb.
- Also possible without growth.
- Brings about change in physical, mental and social development.
Principles of Growth & Development:

1. Principle of Continuity: never ceases
2. Rate of Growth and Development is not uniform:
   • At a particular stage g & d is high than other stages. E. g. Physical g&d more in infancy than emotional development
3. Principle of individual differences:
   • Each child has an inborn/inbuilt timetable.

4. Uniformity of Pattern:
   • In language development the child first learns small words to larger words.
   • In humans growth from head downwards. Head big in babies later body becomes bigger later.
   • Each species has a pattern of development.
5. Development proceeds from general to specific responses:
   • E. g. Infant cries, whole body shakes, but later only vocal cord and eyes are involved.

6. Principle of Integration:
   • Development involves the movement from the whole to parts and from the parts to the whole. Specific to general also.
   • It is the integration of whole and part. E.g. writing
7. Development is predictable:
   • Present rate of development can help predict future development. E. g. mental ability.

8. Principle of Inter relation:
   • G & d in physical, mental, emotional dimensions are inter related and interdependent.
   • E.g. Above avg. intelligence generally have above avg. physical & social development. Poor physical development tend to regress in emotional, intellectual and social development.

9. Principle of Developmental direction:
   • Cephalo cadal (Head towards feet). Child first controls head, arms then legs to stand.
   • Proximo distal (Centre to periphery). Child first control large fundamental muscles then smaller muscles for finer movements.

10. Development is spiral and not linear:
    • Not a straight and steady path.
    • Advances, rests to consolidate, turns back then forward.

11. Growth and Development is a joint product of heredity and environment.
Numbered Heads Together: Write two examples for each principle.

Select:
- a leader,
- a recorder,
- a time keeper,
- an encourager,
- an organiser
- a noise checker.

References:
- Psychological Foundations of Education: Makhija & Dandekar.
- A textbook of Educational Psychology: Bhatia & Bhatia
- A Textbook of Advanced Educational Psychology: - S. Dandapani
- http://www.preservearticles.com/education/
- http://www.who.int/childgrowth/en/

Thank You
Unit 2.1 b Nature & Importance of Heredity and Environment - Social Heredity

(Session 6).
(Time 45+45+45 minutes)

Lesson Summary:
The lesson focuses on the laws of heredity, nature of heredity and environment; and importance of heredity and environment in education; and social heredity. The cooperative learning techniques used are ‘Three minute review’ for the Lead In activity. For the Detailed study ‘Three step interview’ and ‘Think-Pair-Share’ techniques are used. ‘Numbered Heads Together’ is used during the Extended Activity.

Objectives:
- General Objectives:
  o The student tells the nature, importance of heredity and environment and social heredity while working in pairs and groups.
- Specific Objectives:
  o The student tells the nature and importance of heredity while being interviewed by his/her partner.
  o The student gives examples of types of environment while working in pairs.
  o The student cooperates with his/her respective groups and classifies the statements as examples related to heredity or environment or both.
  o The student understands his/her role in the groups and cooperates to answer the questions.

Required Materials:
  o LCD projector and Laptop for showing Power Point Presentation slides to the students.

Step by Step Procedure:
  o Lead in:
    - The teacher asks a student to give a three minute review regarding the principles of growth and development. (Three minute review).
    - The teacher links the last principle related to heredity and environment with the present topic.
  o Detailed Study:
    - The teacher shows slides and discusses about the definition of heredity, laws of heredity and importance of heredity.
    - The teacher conducts an activity with a slide related to ‘colour blindness’ with the students.
- The teacher divides students into pairs and asks them to take turns and ask questions to each other based on the points discussed above. The teacher gives three minutes for the activity. (Three step interview).
- The teacher asks students questions:
  - ‘What is the nature of heredity?’
  - ‘What are the laws of heredity?’
  - ‘What is the importance of heredity?’
- The teacher shows slides and discusses about environment and types of environment.
- The teacher asks all the pairs a question
  - ‘Give examples for each type of environment.’
- The teacher asks students to think individually for a minute, then discuss with their partners. (Think-Pair-Share).
- The teacher asks a few pairs to share their examples.
- The teacher discusses the importance of heredity and environment while showing PPT slides.
- The teacher introduces ‘social heredity’ with a slide.
- The teacher asks pairs to give examples of social heredity. (Think-Pair-Share)

**Extended Activity:**
- The teacher divides the class into groups of six students. Then each member of a group is allotted a number from one to six, which they are instructed to remember. (Numbered Heads Together)
- The students are distributed the following roles for each of the group members: leader, recorder, time keeper, encourager, organiser and noise checker.
- The teacher shows a slide and asks
  - ‘Which of the examples emphasize the importance of Heredity and which ones emphasize the importance of Environment?’
- The teacher gives five minutes for the students to classify the examples while monitoring their activity.
- The teacher calls out a number for a group and another number between one to six, for the group member.
- The student is asked to share the group’s answer with the class.
- After the students have answered they are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher concludes by showing the slide having the references for the topic.
2.1 (b) Nature & importance of heredity and environment, social heredity

Heredity:
- Heredity is the unique sum of the inherent qualities – physical and mental – transmitted to an individual by parents at the moment he is conceived.

Definitions of Heredity:
- ‘Heredity is the sum total of inborn individual traits.’- B.N. Jha
- ‘Ones heredity consists of all the structures, physical characteristics, functions or capacities derived from parents other ancestry or species.’- Douglas and Holland.

Laws of Heredity:
- Law of Similarity:
  – ‘Like begets like’
  – Each species transmits its own code of heredity hence only that species develops from it.

Laws of Heredity:
- Law of Variation:
  – Although children resemble parents they are rarely duplicates of their parents.
  – Combination of genes is unique for each individual.
  – Though Like begets like, still it is not identical.

Laws of Heredity:
- Law of Regression:
  – Some individuals possess extreme characteristics (very tall, very short)
  – The succeeding generations tend to regress to the average of the species.
  – Otherwise species would have characteristics to an extreme extent.
Three Step Interview:

- Ask a question to your partner on any portion covered so far.
- After getting the answer, switch roles and let your partner ask questions.
- Join with another pair and discuss your answers.
- Share your answers with the class.

Nature of Heredity:

- Physical Heredity:
  - Size, form, appearance, colour of skin and eyes etc.
- Psychological Heredity:
  - Intelligence, mental traits, instincts.
  - Also tendency to commit crime to an extent.

Importance of Heredity in Education:

- Determines the sex of the child:
  - The 23rd pair of chromosome from the parents determine the sex of the child.
  - The child is a girl if XX chromosome are received. If the child receives XY chromosome then it is a boy.
  - The father is biologically accountable for the determination of the sex of the new born baby.

Importance of Heredity in Education:

- Determines the Intelligence limit:
  - Schools should have Intelligence service unit to inform trs. of their stu’s intelligence
- Special Heredity Traits:
  - School helps develop inherent traits – aptitudes, interests.
- Determines the physique of the child.
  - Tr. should keep in mind the health of the student while assigning duties.

Importance of Heredity in Education:

- Heredity- its endowments:
  - The natural gifts (reflexes, instincts, emotions, drives etc.) should be developed in the school.
- Correlation between Intelligence and Character:
  - Intelligent persons less characterless as less open to suggestion than dull persons.
  - Thus knowledge of intelligence will help trs. plan for better character development.

Importance of Heredity in Education:

- Knowledge about traits gained through heredity:
  - E.g. Cancer, Colour blindness etc.

Ishihara Colour Test
**Environment:**
- ‘Environment is anything immediately surrounding an object and exerting a direct influence on it.’ - P. Gisburet.
- ‘The environment is everything that affects the individual except his genes.’ – Anne Anastasi.
- ‘Environment covers all the outside factors that have acted on the individual since he began life.’ – Woodworth.

**Types of Environment:**
- **Physical Environment:**
  - Physical feature, climate, food, shelter etc. (even within the womb)
- **Mental Environment:**
  - Intellectual atmosphere at home & school where children learn through experiences.
- **Social Environment:**
  - Man is a social animal. Family, groups, clubs other social bodies around the child.
- **Cultural Environment:**
  - Social values, customs, traditions, institutions

**Importance of Environment in Education:**
- **Internal Environment:** Before birth
  - Diet of the mother
  - Emotional status of the mother.
  - At the time of birth, the environment determines the growth & development of the child. (pre-mature/normal/caesarean delivery, hygienic/unhygienic)

- **External Environment:** Physical, Sociological, cultural & psychological:
  - Influence growth & development. There are differences even between twins.
  - Children from the same family are treated differently by parents.
  - Students in the same class are treated differently by the same teacher.
  - As all children can’t be brought up in the same home, neighbourhood, social etc. set up there are individual differences which are observable in the educational situation.

**Importance of Heredity & Environment:**
- Both are Important.
- One completes the other:
  - Body, Traits, instincts, I.Q. etc- heredity
  - Environment develops physical and mental traits, further develops social traits.
- Complementary to each other. Not opposed to each other.
- Individual is a product of the two.
- Improvement through better environment.

**Importance of Heredity & Environment: Conclusion**
“Nothing is more certain than that, that heredity and environment are co-acting influences and that both are essential to achievement.” – Garret.

Thus
Total behaviour = nature x nurture
(heredity) x (environment)
Social Heredity:
• Is a form of educational environment that affects more than a single generation.
• The Darwin-Galton family produces famous scientists in almost every generation.
• Certain customs & traditions are learnt if one is born in a particular family. It goes on from one generation to another.

Numbered Heads Together:
Which of the examples emphasize the importance of Heredity and which ones emphasize the importance of Environment
• Sohan has two biological daughters who share the same biological mother. Both are tall, well mannered, and musically inclined.
• One sibling brought up in the city is more street smart than the one brought up in the village.
• If one of the identical twin has dark hair, then the other twin has dark hair as well.
• Twins are physically similar having but have different interests.

References:
• Psychological Foundations of Education:- Makhija & Dandekar.
• A textbook of Educational Psychology- Bhatia & Bhatia

• http://www.personalityresearch.org/
• www.mediacollege.com/lighting/colour/colourblind.html

Thank You
Unit: 2.2 Stages of growth & development: later childhood

Lesson Summary:
The focus of this lesson is on the growth and development of later childhood stage. The main areas of later childhood development dealt with this lesson are physical, mental, emotional and social. The Cooperative Learning techniques used for this lesson are ‘Pairs Compare’ for the lead in activity and ‘Round table’ technique for Extended Activity.

Objectives:
- General Objective:
  - The student works in pairs and groups and tells the physical, mental, emotional and social development during the later childhood stage along with their educational implications.

- Specific Objectives:
  - The student tells the different stages of development during the life span of an individual while doing a pair activity.
  - The student explains the various areas of development (physical, mental, social, and emotional) during the later childhood stage.
  - The student tells the importance of the areas of development of the later childhood stage in the learning process.
  - The student tells the role of the teacher in helping students of later childhood stage as a learner.
  - The student cooperates with his/her peers in answering the teacher’s questions while working in pairs or groups.

Required material:
- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher divides the students into pairs.
  - The teacher asks students “List down three things you enjoyed as a child.”
  - The teacher instructs each student to think about the answer for thirty seconds and then discuss it with their partners.
  - The students are given two minutes to discuss and write down the points in their note books. (Pairs Compare).
  - Then the teacher asks two pairs of partners to compare their answers and find similarities in their answers within a minute.
  - At random the teacher asks a few pairs to read out the points written by them.
  - The teacher highlights that all the pairs have ‘playing’ as one of the things enjoyed as children.
  - The teacher links ‘playing’ to ‘childhood’ and introduces the topic.
  - The teacher shows the PPT slide with the various stages of development along with their age ranges.
Detailed Study:
- The teacher shows PPT slides with the various areas of development namely physical, mental, emotional and social during the later childhood stage.
- While discussing these areas the teacher asks a few questions like
- Physical development the teacher asks “Are these children’s motor skills like writing well developed? Why?”
- Mental development the teacher asks “How long will the span of attention last for these children?”, “What type of imagination do these children have?”, “Will they learn concrete concepts easily or abstract concepts easily? Why?”
- Social development the teacher asks “What type of games do these children like, group games or individual games?”, “Are their groups made up of children of both the sexes?”, “Do their groups last for a very long time? Why?”

Extended Activity:
- The teacher divides the class into groups of six members.
- Each group is asked to discuss and write down four points regarding the role of the teacher in catering to the needs of the students in the later childhood stage.
- The teacher asks each group to write answers to the following questions according to their group numbers:
  - What is the role of the teacher in catering to the later childhood children’s need according to their physical development?
  - What is the role of the teacher in catering to the later childhood children’s need according to their mental development?
  - What is the role of the teacher in catering to the later childhood children’s need according to their social development?
  - What is the role of the teacher in catering to the later childhood children’s need according to their emotional development?
- A piece of paper is circulated amongst the group members in each group. Each member writes a point and reads it aloud. The group members discuss all the points written and organise the answer within their respective groups. The students are given five minutes to complete the activity. (Round table technique).
- A group is selected randomly and asked to read out their points.
- This is followed by a discussion with other groups regarding points not covered by the group selected by the teacher.
- The students are asked to note down the answers identified through the activity.
- The teacher then shows the slides with the answers and summarizes the discussion.
- The members from other groups are encouraged to add in more points.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher then shows the concluding PPT slide and closes the session.
2.2. Stages of growth & development: later childhood (physical, mental, emotional, social).

Paper II Section I
Psychology of Development and Learning.

Introduction: Stages of Development:

<table>
<thead>
<tr>
<th>Names of the stages</th>
<th>Ages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infancy</td>
<td>From birth to 2 years</td>
</tr>
<tr>
<td>Early childhood</td>
<td>2 - 5 years</td>
</tr>
<tr>
<td>Later Childhood</td>
<td>6 - 12 years</td>
</tr>
<tr>
<td>Adolescence</td>
<td>13 – 19 years</td>
</tr>
<tr>
<td>Adulthood</td>
<td>20 – 70 years</td>
</tr>
</tbody>
</table>

Physical Development:

- Height & Weight:
  - Rate of physical growth continues to be slow
  - Slow period is called pre-puberty lag

- Stature:
  - Girls generally shorter & lighter than boys
  - Legs grow faster – long legged
  - Postural effects are likely to appear now may be caused – infection, malnutrition, fatigue/ emotional disturbances

- Respiration & Circulation:
  - Lungs continue to grow & breathing capacity increases
  - Heart not yet attained full growth
  - Thus prevent child from exerting too much

- Muscular Development:
  - Very active loves physical activities
  - Muscle coordination imperfect causing falls
  - 9-12 it improves. Actions more refined & skillful
Physical Development:

Motor Development:
- Good mastery over basic skills
  - sitting, standing, walking, simple finger manipulation
- Trying to climb 2 steps at a time
- By 12 improved coordination
- Handwriting improves

Mental Development:

Ready for school, improved vocabulary, simple concepts, keen desire to read & write

Mental Development:

Span of Attention:
- Very short
- Choose materials carefully – 2 or 3 letter words
- Impatient with his slow growth becomes critical of own work
- Girls concentrate better
- Motivation increases if reward is announced

Mental Development:

Interest:
- Interest starts widening.
- Talks less about self
- Yet limited to his immediate environment (Lifman more interesting than the PM)
- 9-12 yrs more curious about foreign people (use dictionaries, encyclopedias)

Mental Development:

Memory & Imagination:
- Learns poems & song easily
- not forgotten easily
- Imagination is prolific
- Believes in fairies and witches
- 9 -12 yrs turns a realist

Mental Development:

Concept formation:
- Concrete object concepts
- Vague abstract concepts (justice, honesty)
- Can distinguish between things
- Crude concept of time & distance
- Moral sense- parental approval & disapproval
Mental Development:
- Reasoning:
  - 6 yrs incapable of reasoning
  - Draws conclusions from casual observations
  - Can’t take jokes at oneself
  - Tries to please parents & teachers
  - Critical attitude not developed. Trs. Are infallible

Language Development:
- 6 yrs fairly large vocabulary
- Desire to learn meanings
- No more baby talk
- By 9 yrs- talk fluently
- 9-12 yrs able verbalize their feelings easily

Emotional Development:
- Slowly less self centered
- No longer centre of attention-immature behaviour (thumb sucking, temper tantrum)
- By age 9 adjust himself better in school

Social Development:
- Like group activities & games
- Willing to cooperate with group
- Follow directions of the leader
- Unable to play complex games
- Team spirit, self reliance not developed
- Groups are short lived

Social Development:
- Quarrels are common
- Settle differences (boys-physically, girls-arguments)
- 9-12 group affinity increases

Social Development:
- Sexes are segregated
- Use code language
- Parental approval imp, but group loyalty increases
Round Table Technique

* What is the role of the teacher in catering to the later childhood children’s need according to their physical development?
* What is the role of the teacher in catering to the later childhood children’s need according to their mental development?
* What is the role of the teacher in catering to the later childhood children’s need according to their social development?
* What is the role of the teacher in catering to the later childhood children’s need according to their emotional development?

Educational Implications:

* Avoid using time concepts like 250 BC or 410 BC
* Tr. avoid inconsistency in their behaviour- image may be reduced
* Games under proper guidance as they tend to over strain their muscles
* Use actual measuring instruments to make the concept of space clear

Educational Implications:

* 6-9 yrs avoid over emphasizing on reading & writing
* 12 yrs improves
* Textbooks should not have long words (short attention span)
* Use pictorial aids to make concepts clear. Concrete to Abstract.
* Lesson related to direct environment

Conclusion:

* Parents think it is a carefree period
* But child’s external happiness may harbour fears (losing love & security of parents)
* Afraid of darkness, ghosts, dead bodies of animals and humans
* However much calmer than adolescence
Unit: 2.2 b Stages of growth & development: Adolescence

(Session 8)
(Time 45 +45 minutes)

Lesson Summary:
This lesson focuses on the physical, mental, emotional and social development that occurs during the adolescence stage. During the lesson, in the ‘Lead in’ activity the Cooperative Learning techniques used is ‘Pairs Compare’ and technique utilized for the Extended Activity is the ‘Round table’ technique.

Objectives:
- General Objective:
  o The student tells the physical, mental, emotional and social development during the adolescence stage along with their educational implications, while working in pairs and groups.

- Specific Objectives:
  o The student describes their experiences during the adolescence stage of development while doing a pair activity.
  o The student explains the various areas of development (physical, mental, social, and emotional) during the adolescence stage.
  o The student explains adolescence as a period of ‘stress and storm.’
  o The student tells the role of the teacher in helping students of the adolescence stage to adjust and learn.
  o The student cooperates with his/her peers in answering the teacher’s questions while working in pairs or groups.

Required material:
- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher divides the students into pairs. (Pairs Compare).
  - The teacher asks students “Write down what changes occurred in you as a teen ager and describe your relationship with your elders.”
  - The teacher instructs each student to think about the answer for thirty seconds and then discuss it with their partners.
  - The students are given two minutes to discuss and write down the points in their note books.
  - The teacher asks two pairs of partners to compare their answers and find similarities and differences in their responses.
  - The teacher chooses at random a few pairs to read out the points written by them.
  - The teacher highlights the common points related to the physical changes the students experienced as they became teen agers and the strain in their relationship with their elders.
  - The teacher links ‘the changes and stress’ to ‘adolescence’ and introduces the topic.
The teacher shows the PPT slide with the introduction regarding adolescence stage.

- **Detailed Study:**
  - The teacher shows PPT slides with the various areas of development namely physical, mental, emotional and social during the adolescence stage.
  - While discussing these areas the teacher asks a few questions like:
  - Physical development the teacher asks “What are the main physiological changes that take place in both girls and boys during the adolescence stage?”
  - Mental development the teacher asks “What do you mean by abstract terms?”, “Why do their interests become narrow and specific as compared to those in the later childhood?”, “Why do adolescents engage a lot in day dreaming?”
  - Emotional development the teacher asks “What is the difference between fear and anxiety?”, “With whom do the adolescents identify themselves more, with their parents or their peers? Why?”, “What is the difference in the emotional expressions of a child and an adolescent?”
  - Social development the teacher asks “What do you mean by Hero Worship?”, “Which type of status do the adolescents crave for?”, “What do you mean by generation gap?”

- **Extended Activity:**
  - The teacher divides the class into groups of eight members each.
  - The groups are made according to their months of birth. Eight Students born in January and February are grouped together. If there is less number of students in the group then a few students born in the month of March are added to have a total of eight students in the group. In this manner the groups are formed.
  - Each group is allotted one area of development. The Teacher asks each of the groups to discuss and write down the role of the teacher in helping the adolescents cope with adjusting and learning related to the allotted area of development. The teacher gives fifteen minutes for each group to discuss. (Round Table technique).
  - A book is circulated among the group members within a group. Each member has to write one point regarding the role of the teacher in dealing with the adolescent according to the area of development allotted to the group.
  - The teacher then at random calls out a group and asks them to present their points.
  - The members from other groups are encouraged to add in more points.
  - The activity is concluded by the teacher giving all the students 5 minutes to discuss the following questions:
    - How they worked as a group?
    - What activities helped them to achieve their group goal?
    - What things should they avoid doing in the future activities?
  - The teacher then shows the PPT slides and discusses some of the points and asks the students to write down all the points arising out of the discussions in their note books.
2.2 Stages of growth & development: adolescence (physical, mental, moral, emotional, social).

Paper II Section I
Psychology of Development and Learning.

Pairs Compare:
‘Write down what changes occurred in you as a teen ager and describe your relationship with your elders.’

Introduction:
Adolescence is the period of transition from childhood to adulthood. It is a crucial stage between the age of 13 to 19 years. Two phases:
- Early adolescence- 13 to 16 years.
- Later adolescence- 17 to 19 years.
Said as the period of ‘Stress and Storm’

Different aspects of development:
- Physical Development:
  - Height & Weight
  - Appearance
  - Health
- Sexual Development:
  - Puberty
  - Signs of Puberty
- Mental Development
- Emotional Development
- Moral Development
- Social Development

Mental Development:
- Period of Great Intellectual Development
- Concept Formation:
  - Great ability to generalize.
  - Understands abstract terms- time, love, duty
  - Increased ability to manipulate symbols.( algebraic problems)

Mental Development:
- Reasoning:
  - Does not accept any statements uncritically.
  - Argument with trs. & parents increases
  - Critical attitude emerges.
  - Checks validity using reasoning.
  - Can trace consequences of hypotheses.
  - Still can over generalize.
  - Feel flattered when asked for opinion.
Mental Development:
- Interest:
  - It becomes narrower & more specific.
  - New hobbies develop
  - Reading for pleasure- imp. pass time.
  - Adults must be alert as they get attracted to obscene literature.
  - Are interested in movies & music
  - Ambitions more realistic
  - Shows interest in national & international affairs.

- Imagination:
  - Fantasy still plays an imp. role.
  - Day dreams- to fulfill unrealized goals.
  - Day dreams may help solve problems.
  - It is healthy only when indulged occasionally.
  - It becomes dangerous only if it is repeatedly withdraws into their fantasies.

Emotional Development:
- A stormy period:
  - Emotional instability
  - Moods change rapidly.
- Fear & anxiety:
  - Differences in appearance from the peers cause anxiety & fear.
  - Parents may increase these emotions with unsympathetic attitude & constant nagging.
  - Though generally rebels, still needs parental approval.
  - Many prejudices formed remain thru life.

- Expression of Emotions:
  - Rarely shows overt emotions.
  - If shown feels guilty.
  - They like sentimental songs & give gifts.
  - As they grow older outbursts become less.
  - Realizes he cannot force his parents to change.

Moral Development:
- Acc. to Cornbach: The Rational Conscientious Stage: (13-18 yrs. Highest stage of Character Development)
  - After critically analyzing the values, he comes to his own conclusion.
  - Develops sense of Self Regard and voices his conscience
  - Feels he is a valuable member of the society

- Acc. to Kohleberg
  - In early adolescence s/he understands the social system and accepts the law of the land. (The 4th Stage of Conventional Morality: Law and Order Orientation)
  - The later adolescence s/he accepts socially established norms, social needs & rights of others. But their decisions are not final and are flexible. (The 5th Stage of Post Conventional Morality)
Social Development:

Peer Groups:
- Period of increasing social conformity.
- Tries to conform to groups by dressing according to the peers.

Hero Worship:
- Ardent fans of movie & sports stars.
- Identifies by dressing like them.
- Parents are considered as misfits

Need for status:
- Feels he should be treated as an adult.
- Want independence- specially economical independence.
- Strongest desire to do as one pleases.

A period of storm & stress:
- All above reasons causes tensions
- Increase in critical attitude & strong group loyalties cause trouble with elders.

The generation gap:
- Each one has his own opinion, beliefs & life styles & communication between the 2 generations almost comes to a standstill.
- Increase in critical attitude increases this gap.
- Demands freedom, when denied causes more gap.
- Adults don’t want to accept changes.
- They are great idealists, get frustrated & angry when they see parents & teachers having double standards.

Educational Implications:
- Take them into confidence & explain the various physiological changes to avoid stress & anxieties.
- As they grow their interest (specific to individuals) also vary so the school must provide various facilities to develop their interests. E.g. Rich library.
- School must provide a healthy environment for the mixing of boys & girls.

Round Table Technique:
- Discuss and write down the role of the teacher in helping the adolescents cope with adjusting and learning related to the allotted area of development.

Educational Implications:
- They seem critical & difficult. But they appreciate if their views are asked.
- They do not like adult’s views imposed on them.
- They demand independence. So the teacher must provide chances of self-study & self expression.
- Rules framed with their help is easy to enforce. Give responsibilities.
Educational Implications:

- Tr. should guard against hurting their feeling & unnecessarily challenging them as it may arouse destructive tendencies.
- Simplicity, sincerity & a friendly attitude works wonders with them. They become the nicest people.
- Tr. should avoid adopting double standards while dealing with them to reduce the generation gap to widen.

Conclusion:

The Generation Gap can be bridged easily if we decide to be more fair in our dealings & show a willingness to accept the youth as an adult.

Thank You
Unit 2.3 Role of school in growth & development of the learner.

(Session 10)

(Time 45 minutes)

This session is given to a pre service teacher to conduct. The cooperative learning teaching technique used was ‘peer tutoring’. The pre service teacher is given the topic and references. The teacher is available for giving inputs to the pre service teacher in case of doubts. The pre service teacher is guided in preparing a lesson plan and present the session in the classroom consisting of his/ her peers.
Unit: 3.1 Nature of individual differences

Lesson Summary:
The focus of this topic is meaning and nature of individual differences. It also deals with the two types of individual differences i.e. Intra individual differences and Inter individual differences. The Cooperative Learning technique used during this lesson is ‘Paired Heads Together’ and ‘Think-Pair-Share’.

Objectives:
- General Objective:
  - The student explains the meaning and types of individual differences while working in pairs.

- Specific Objectives:
  - The student works in pairs and explains the distribution of any human quality according to the Normal Probability Curve.
  - The student tells the nature, meaning and examples of individual differences.
  - The student tells the meaning of inter individual differences with examples.
  - The student tells the meaning of intra individual differences with examples.
  - The student cooperates with his/her peers in answering the teacher’s questions while working in pairs.

Required material:
- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher asks the students to draw a flower in their note books.
  - The teacher gives two minutes to draw and then asks a few students to show their drawing to the class.
  - The teacher stresses the point that each ones flower is different according to their shape and size.
  - The teacher introduces the topic Individual differences.

- Detailed Study:
  - The teacher divides the students into pairs. In each pair a student is allotted as alphabet ‘A’ and the other is allotted alphabet ‘B’
  - The teacher shows a slide with I.Q. scores of individuals distributed in a Normal Probability Curve.
  - The teacher asks students “Explain how the I.Q. scores have been distributed in this diagram.”
  - The teacher instructs each student to think about the answer for thirty seconds and then discuss it with their partners.
  - The students are given two minutes to discuss and write down the points in their note books.
  - The teacher chooses at random a few pairs and asks only the ‘A’s to read out the points written by them. (Paired Heads Together)
- The teacher highlights that the frequency of individuals decreases as one goes from the centre of the curve to the two ends. Thus individuals with average I.Q. are concentrated in the centre of the curve giving it a bell shape.
- The teacher shows the PPT slide with the meaning of individual differences.
- The teacher explains the topic inter individual differences.
- The teacher asks the pairs to write down what will be the meaning on intra individual difference in their books.
- The teacher gives the students thirty seconds to think on their own and then discuss it with their partners.
- The teacher asks a pair to share their answer.(Think-Pair-Share)
- The teacher shows PPT slides with the types of individual differences.

**Extended Activity:**
- The teacher asks each pair to write down three examples for inter and intra individual differences in their note book.
- After thinking about it individually, the students are given three minutes to discuss with their partners and write down the examples.
- The teacher asks a few pairs to share their examples with the class. This time the teacher asks only the ‘B’s to give the answers (Paired Heads Together)
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a pair?
  - What activities helped them to achieve their pair goal?
  - What things should they avoid doing in the future activities?
- The teacher concludes by saying that there are many causes of individual differences which will be discussed in the next class.
3.1 Nature of individual differences: inter and intra

Paper II Section I:
Psychology of Learning & Development

Individual Differences:
• When individuals are studied, there is a continuous gradation from one extreme to the other.

Individual Differences:
• A concentration is seen around the central point (approximately about 60%)
• The frequency of occurrence decreases as the deviation from the mean increases on either side of the continuum.
• These variations can be seen in the cognitive, affective and psychomotor domains.

Individual Differences:
"Measurable differences have been shown to exist in physical shape, psychological functions, motor capacities, intelligence, achievement & knowledge, interests, attitudes and personality traits." - Tyler

Inter- individual differences:
• No two individuals are alike
• Differences between individuals is known as inter individual difference
• The differences are more observed in complex skills than simple ones.
• E.g. Many children learn to paint, but few become famous artists.

Think-Pair-Share:
What is meant by intra individual differences?
Intra-individual differences:

- Variations are also found within an individual.
- We find differences in an individual with regard to his cognitive, affective and psychomotor abilities.
- E.g. One may be good in sports, but not as good in academics.

Paired Heads Together:

Write three examples each of interindividual differences and intra-individual differences.

Thank You
Unit: 3.2 Causes of Individual differences: Personal and Environmental

(Session 11)
(Time 45+45 minutes)

Lesson Summary:

The topic focuses on the causes of individual differences. There are various causes of individual differences. These have been categorized into two main types, namely personal causes and environmental causes. The Cooperative Learning techniques used during this lesson are the ‘Three Minute Review’ for the ‘Lead in’ activity and ‘Think-Pair-Share’ used in the ‘Detail Study’ and ‘Extended Activity’.

Objectives:

- General Objective:
  - The student tells the causes of individual differences while working in pairs.

- Specific Objectives:
  - The student works in pairs and identifies the causes of individual differences according to the examples shown on the PPT slides.
  - The student explains the concepts like ability, aptitude, motivation, environment.
  - The student explains individual differences caused due to rural and urban environment after discussing with his/her partner.
  - The student cooperates with his/her peers in answering the teacher’s questions while working in pairs.

Required material:

- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:

- Lead in:
  - The teacher gives a three minute review of the previous lesson by asking the students the following questions:
  - “What is the meaning of individual differences?”
  - “What are the types of Individual differences?”
  - “Give an example of inter individual difference and intra individual difference among individuals?”
  - The teacher links the examples with the causes of individual differences and introduces the topic.
  - The teacher clarifies that the causes of individual differences are categorised into personal causes and environmental causes.

- Detailed Study:
  - The teacher divides the students into pairs.
  - The teacher shows a PPT slide with examples of individual differences.
- The teacher asks students “Identify the cause of the individual difference between the two persons.”
- The teacher instructs each student to think about the answer for thirty seconds and then discuss it with their partners.
- The students are given one minute to discuss and write down the answer in their note books. (Think-Pair-Share).
- The teacher chooses at random a few pairs to read out the answer written by them.
- The teacher asks the following questions related to each of the causes and later shows the PPT slides for further discussions:
  - Aptitude: “What is the difference between ability and aptitude?”
  - Motivation: “What is the meaning of motivation?”, “Give an example of a motivation cycle.”, “How can you motivate students to learn?”
  - Interest: “How can you make the subject you are teaching more interesting for the students?”
  - Attention: “Which type of attention (involuntary, voluntary or habitual attention) should a teacher try to develop among students? Why?”
  - Attitude: “Which are the two main agencies of learning that determine the attitude of the individual?”, “How can you as a teacher improve the attitude of the students?”
  - E learning: The teacher shows on PPT slides what traditional learning environment develops among students and asks the pairs to write down what e learning environment develops, thus highlighting the individual difference caused due to the different learning environments.
  - Rural and urban: The teacher asks the students to switch their pairs and asks them to write down how rural and urban areas cause individual differences among people.
- The teacher follows the steps of Think Pair and Share for all the above questions.
- The teacher shows PPT slides regarding the educational implications of individual differences and discusses them with the students.
  
  **Extended Activity:**
- The teacher asks each pair to write down the role of the teacher to cater to individual differences among students. (Timed Pair Share)
- After thinking about it individually, the students are given three minutes to discuss with their partners and write down the examples.
- The teacher asks a few pairs to share their examples with the class.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a pair?
  - What activities helped them to achieve their pair goal?
  - What things should they avoid doing in the future activities?
- The teacher concludes by saying that apart from these causes there are other factors that affect individual differences which will be discussed in the next class.
3.2 Causes of Individual differences

Think-Pair-Share

Read the examples given in the following slides during the session and identify what is the factor causing individual differences.

Personal Causes:
- Readiness to learn:
  - It is dependent on motivation, mood, maturity and the ability of the individual.
  - Some individuals are always eager and ready to learn new things, whereas some are not eager and consider it a burden.

Personal Causes:
- Leena can solve complex sums faster than Rohit, but Rohit draws neater than Leena.
- Abilities:
  - There are differences in mental, artistic or motor abilities among different individuals.
  - These abilities and general intelligence help in selecting a profession or vocation.

Personal Causes:
- Aptitude:
  - Implies "potential for learning"
  - An individual’s capacity to learn & attain a particular level of achievement in a specific field.
  - Intelligence=potential ability to learn; Aptitude=potential for acquiring skill in a particular area.
  - E.g. some students have inclination towards sports, learning languages, music.

Personal Causes:
- The teacher finds very few students have no drive to learn.
- Motivation:
  - ‘Motivation is the process of arousing, sustaining & regulating activity’ - Good.
  - Types- Primary (biological/physical) motives, Secondary (psychological & social) motives.
  - Motivational cycle:
Personal Causes:

- **Motivation:**
  - Students vary in motivation
  - To motivate:
    - Have child centered approach
    - Link new with old knowledge
    - Use effective methods of teaching & teaching aids
    - State goals clearly
    - Give knowledge of results
    - Praise / blame

- **A young child’s emotions are short lived** (forgives and forgets easily), but an **older child’s emotions last longer**

- **Age:**
  - It causes differences in physical appearance, emotions, interests & abilities.
  - Friends change with age due to change in interests becoming more specialised.

- **Men excells women in speed and stamina in sports.**
- **Gender & maturity:**
  - Women better in linguistic abilities & memory
  - Men better in manual work, mechanical & mathematical abilities.
  - Sports records show men have more speed and stamina.

- **Every member in a family checks different sections of the news paper.**
  - E.g. father may check the sports section and kids may check the cartoon strips.

- **Interest:**
  - Stus vary in their interest which affects their achievement.
  - Interest in a subject increases achievement due to self motivation, joy and confidence in the student.
  - Teacher plays a very important role in developing the interest of the students in the subject being taught.

- **Interest:**
  - Can be learnt & developed through environmental facilities and opportunities.
  - Various inventories help in identifying stu’s interest.
  - This information is useful in educational & vocational guidance.
Personal Causes:

- While the class is on suddenly there is a noise and a student look out of the classroom.

Personal Causes:

- Attention:
  - It is interest in action.

  ![Attention Types Diagram]

  - Teacher should try to gradually shift student's attention from involuntary to voluntary and finally to habitual type of attention.

Personal Causes:

- Attitude:
  - Depends on environment, family atmosphere, school atmosphere & relationship of the individual with peers.
  - Some are neat, regular others are untidy, lazy etc.
  - Attitude is mostly developed in home & school.
  - Trs. are responsible to develop a proper & +ve attitude in students.
  - Provide favourable atmosphere in the class.

Personal Causes:

- Environmental Causes:
  - Students from slums tend to learn slower than those from higher class society.
  
  - Socio economic status:
    - Economic condition leads to individual differences
    - Some poor fight poverty to reach the top.
    - Some rich take some evil ways & may become poor.

Environmental Causes:

- E- environment incorporates e learning in educational environment.

  - Differences in e- environment and traditional learning environment are as follows:

  ![E-learning vs Traditional Learning Diagram]
Discuss with your partners:

Q. How will rural and urban environment affect learning?

Educational Implications:

- Child centered education demands that individual differences must be considered while planning the curriculum so that the needs, abilities & interests are met for all individuals.
- It helps trs. realize the importance of flexibility in the curriculum.
- Schools must offer a wider choice of subjects to students according to their age & ability.
- The tr. should have a positive approach to individual difference among students & a factor to enliven the t-l process.
Unit 3.3. Individual differences w.r.t.: personality, self-concept, achievement motivation, study habits, emotions.

(Session 12)
(Time 45+45 mins)

Lesson Summary:
The focus of the topic is the how factors like personality, self-concept, achievement motivation, study habits and emotions result in individual differences. It discusses the meaning of these factors and also the teacher’s role in modifying these factors for the all-round development of students. In this lesson the ‘Three Minute Review’ was conducted for the ‘Lead in’ stage. During ‘Detailed Study’ the Cooperative Learning technique used was ‘Think-Pair-Share’. For the ‘Extended Activity’ the technique used was ‘Formulate, Listen, Share and Create’.

Objectives:
- General Objectives:
  - The student tells how factors like personality, self-concept, achievement motivation, study habits and emotions contribute to individual differences and their respective educational implications while working in pairs and groups.
- Specific Objectives:
  - The student tells the meaning of personality, self-concept, achievement motivation, study habits and emotions with the help of his/her partner.
  - The student explains how personality, self-concept, achievement motivation, study habits and emotions contribute to individual differences.
  - The student draws graphic organizers to illustrate how the teacher can modify these factors for the proper development of students.
  - The student cooperates with his/her peers while working in pairs in answering the teacher’s questions and drawing the graphic organizers in the group work respectively.

Required material:
- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher introduces the topic by asking questions based on the previous class.(Three minute Review)
  - What is the meaning of individual differences?
  - What are the types of individual differences?
  - Give examples of each type of individual differences.
  - The teacher shows the answers on the slide and links the answers with the factors that contribute to the individual differences.
Detailed Study:
- The teacher shows the diagram of the factors on the slide.
- The teacher divides the class into pairs and asks them questions. Each time the pairs are given a minute to think alone then the teacher asks the pairs to discuss with each other the answer. (Think-Pair-Share)
- The teacher then randomly asks a pair to share their answers with the whole class.
- The teacher then shows the answers on the PPT slides.
- The teacher asks the following questions while discussing each of the factors:
  - What do you mean by personality?
  - What is the meaning of self-concept?
  - How can achievement motivation bring about individual differences in a person’s performance?
  - Give any three good study habits.
  - How do emotions contribute to individual differences?

Extended Activity:
- The teacher shows a PPT slide with formats of concept maps.
- The teacher asks each student to think of the role of the teacher to help students modify these factors in an appropriate way.
- The teachers asks the students to work in fours and draw any one format of the concept map and write down their points on a piece of paper. (Formulate, Listen, Share and Create).
- The teacher gives student fifteen minutes to draw the concept map.
- The teacher then asks at random any group to explain their concept map.
- Other groups are encouraged to give more points.
- The teacher shows PPT slides with the answers while the students note down the points.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher concludes the session by highlighting the role of the teacher in the all-round development of the students.
3.3 Individual differences

w.r.t.: personality, self concept, achievement motivation, study habits, emotions.

Paper II Section I
Psychology of Development and Learning.

Individual Differences:
- Every individual is unique.
- Every one is a typical human being & different from others.
- Measurable differences have been shown to exist in physical size & shape, psychological functions, motor capacities, intelligence, achievement & knowledge, interests, attitude & personality traits. - Tyler.

Some Areas of Individual Differences:
- Self Concept
- Personality
- Achievement Motivation
- Study Habits
- Emotions

Think-Pair-Share
- During the session questions will be asked.
- Think about the answers for a minute individually
- Turn to your partners and discuss the answers
- Share the answer with the class if your pair is asked by the teacher.

Personality:
- Personality is the dynamic organisation within the individual of those psychophysical systems that determine his unique adjustment with the environment. (Allport, 1937).
- Personality can be defined as a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, motivations, and behaviors in various situations. (Ryckman, 2004).
- The word "personality" originates from the Latin word "persona", which means "mask."

Personality:
- Personality is thought to be determined largely by either genetics and heredity, by environment and experiences, or by some combination of the two. There is evidence for all possibilities.
- Contemporary research suggests that most personality traits are based on the joint influence of genetics and environment.
Personality:

Gordon Allport, Abraham Maslow, and Carl Rogers were all advocates of the uniqueness of individuals. Behaviorists and cognitive theorists, in contrast, emphasized the importance of universal principles such as reinforcement and self-efficacy.

Self Concept:

Some have very clear self concepts. They know their strengths & weaknesses. They are frank, confident, resolve conflicts easily. They do not get frustrated, can manage time & stress. Those having poor self concept get disturbed, angry, tensed, have fear & stress. They are moody, excitable,- maladjusted personality.

Achievement Motivation:

The feeling to achieve in life & be successful in work. Some are highly motivated in this need some are not. This is influenced by childhood experiences. High AM- active, mentally alert, independent, faces challenges. Development of AM depends on- home environment, parents, guidance & encouragement.

Achievement Motivation:

“Success & Failure” have a great impact on pupil's self concept, influencing his achievement. Failure demoralizes leading to negative self concept. Success helps building confidence & positive self concept.

Study Habits:

Students differ in:
– Reading and note taking
– Concentration
– Having a clear understanding of the topics
– Reviewing and using reference materials
– Understanding the material to learn
– Ways of memorizing- underlining, margin notes, re-writing.

Study Habits:

The teacher should help in developing good study skills to succeed in school
Emotions:

- Some have more dominant positive emotions, others have more negative emotions.
- There is a difference in the expression of emotions.
- Some are more stable & matured, others are not.
- These cause individual differences.

Formulate, Listen, Share and Create

Prepare a graphic organizer to show how you help your students to modify the following in an appropriate way.

Decision making:

Formulate, Listen, Share and Create

Example of another format

How to Modify:

Personality:
- Training
- Model
- Lectures about great personalities
- Give responsibilities
- High ethos in school
- Moral values through daily teaching

How to Modify:

Self concept:
- Make students aware of their + and – points
- Avoid ridicule & help reduce –points.
- Increase confidence in students through proper praise and reinforcement
- Help them have a realistic concept about self
- Discourage anger and frustration among students & help them overcome their limitations.

How to Modify:

Achievement motivation:
- The school is expected to give opportunities to get success at least in some activities.
- Have realistic goals according to their abilities
- Generally seen praise is more effective than blame/punishment as it reinforces the correct action.
- Praise more useful for weak students and blame more effective for smart students
- Use praise and blame judiciously
- Compete with oneself not with others achievements.
How to Modify:

Study habits:
- Give guidance for developing these habits
- Plan assignments to reinforce these habits
- Tr. must also follow these habits and be a role model

Emotions:
- Encourage students to praise one another
- Discourage irrational emotions
- Discourage intense negative emotions
- The teacher must avoid showing negative emotions frequently.

Thank You
Unit: 3.4 Mental Health

(Session 13)
(Time 45 mins)

Lesson Summary:

The concept of mental health is the focus of the lesson. It also highlights the difference between mental health and hygiene. Traits of mental health and ways to keep mental health are also included in this lesson. The cooperative learning techniques used are ‘Think-Pair-Share’ in both the lead in and detailed study. The ‘Round Table’ technique is used for the extended activity.

Objectives:
- General Objective:
  - The student tells the meaning of mental health, mental hygiene, traits of mental health and ways to keep mental health.
- Specific Objectives:
  - The student works in pairs and tells the concept of mental health.
  - The student tells the difference between mental health and mental hygiene while working in pairs.
  - The student tells the traits of a mentally healthy person.
  - The student works in groups and gives examples of how to keep mental health.

Required Material:
- LCD Projector and Laptop for showing PPT slides to students.

Step by Step Procedure:
- Lead in:
  - The teacher divides the class into pairs and asks “What are the qualities of a mentally healthy person?”
  - The teacher gives half a minute for the students to think individually and then a minute to discuss with their partners.
  - At random the teacher asks any pair to stand up and share their answers with the class. (Think-Pair-Share).
  - The teacher asks two more pairs and combines their answers to introduce the topic ‘mental health.’
- Detailed Study:
  - The teacher shows the PPT slides and discusses the meaning and definition of mental health.
  - The teacher asks the pairs “What is the difference between health and hygiene?”
  - The teacher asks following questions to the students in pairs (Think-Pair-Share)
  - The teacher asks any pair at random to answer.
  - The teacher asks “What will be the difference between mental health and mental hygiene?”
- After every question the teacher asks students to think individually at first, then discuss with their partners for a minute.
- The teacher randomly asks any pair to answer.
- The teacher discusses the answer and links it with the next questions while showing slides.
- The teacher shows the PPT slides and discusses the traits of a mentally healthy person.
- The teacher explains ways to maintain good mental health in the family while showing the PPT slides.

○ **Extended Activity:**
- The teacher divides the class into groups of eight students.
- The teacher shows the main points of ways to keep good mental health.
- The Teacher asks each of the groups to discuss and write down examples of ways to keep good mental health in school under each main point. The teacher gives five minutes for each group to discuss. (Round Table technique).
- A book is circulated among the group members within a group. Each member has to write an example of one of the points of keeping good health in school.
- The teacher then at random calls out a group and asks them to present their points.
- The members from other groups are encouraged to add in more points.
- All the students are given 5 minutes to discuss the following questions:
  ○ How they worked as a group?
  ○ What activities helped them to achieve their group goal?
  ○ What things should they avoid doing in the future activities?
- The teacher then shows the PPT slides and discusses some of the points and asks the students to write down all the points arising out of the discussions in their note books.
3.4 Mental health

Paper II Section I:
Psychology of Learning & Development

Think-Pair-Share:

What are the qualities of a mentally healthy person?

Introduction:

• “A mentally healthy individual is one who is himself satisfied, lives peacefully with his neighbours, makes healthy citizens of his children, and even after performing these fundamental duties has enough energy left to do something for the benefit to the society.”

Introduction:

• “Let us define mental health as
  – the adjustment of human beings to the world and to each other with a maximum of effectiveness and happiness.
  – It is the ability to maintain an even temper, an alert intelligence, socially considerate behaviour and a happy disposition.”- K.A. Menninger in his book “The Human Mind”

Introduction:

• The greater the degree of adjustment the greater will be the mental health of the individual.
• Lesser mental health will lead to lesser adjustment and greater conflict
Pair Work

- What is the difference between ‘health’ and ‘hygiene’?
- What is the difference between ‘mental health’ and ‘mental hygiene’?

Mental Health & Mental Hygiene:

- Mental Health is that ability by means of which we establish our adjustment with the difficult situations of life & mental hygiene is that tool which makes this adjustment possible.
- Mental hygiene is the means to mental health.
- Mental hygiene is the science which studies the laws and means of achieving mental health, of maintaining it as well as doing away with mental ill health.

Mental Health & Mental Hygiene:

- Mental health is the end and mental hygiene is the means.
- Mental hygiene has 3 important aspects:
  - curative,
  - preventive and
  - preservation.

Traits of Mental health:

1. Self evaluation:
   - Accepts his faults & tries to correct them.
   - Introspects to analyse his problems, prejudices, difficulties etc and reduce them to a minimum.

2. Adjustability:
   - Adjusts to new situation without much delay, anxiety or fear.
   - He does not think of old age when he is young or think of his youth when he is old.

3. Maturity:
   - Intellectual and emotional maturity
   - Behaves like a balanced, cultured & sensible adult in all manners.

4. Regular life:
   - Proper habits in food, clothing & the normal life routine.

5. Absence of extremism:
   - E.g. an excessive ambition never lets its possessor rest.

6. Satisfactory Social adjustment:
   - Is engaged in some project for the welfare of the society.
   - The greater the balance in the social relationships the better will be the mental health.

7. Satisfaction from chief occupation:
   - The individual who studies only to pass the examination & finds no pleasure in his work is neither a good student nor a healthy individual.
How to keep Mental Health:
• Mental health in the family:
  – Suitable atmosphere for the child's personality to develop.
  – Much depends on the relationship the child shares with the parents and siblings.
  – Give free & unrestrained atmosphere for the child’s personality development.
  – Parents must be patient and have an insight into the child’s psychology.

Round Table technique
Give examples for the following ways to keep mental health in School.

How to keep Mental Health:
• Mental Health in school:
  1. Discipline
  2. Affectionate behaviour
  3. Play and recreation
  4. Sex Education
  5. Educational Guidance
  6. Personal Guidance
  7. Vocational Guidance
  8. Formation of good habits
  9. Balanced curriculum
  10. Balanced home work assignment

How to keep Mental Health:
• Mental Health in school:
  1. Discipline:
    – Discipline should not be exercised by creating fear of punishment, but through arousing feelings of responsibility & desire to be law abiding citizens.
    – True discipline is self discipline.
    – Use democratic means to select students to help maintain discipline.

How to keep Mental Health:
• Mental Health in school:
  2. Affectionate behaviour:
    – Will inspire students to obey, respect and avoid displeasing the teacher.
    – Teacher should not be biased.
    – Avoid unhealthy competition.
  3. Play and recreation:
    – Repressed motives can be expressed through games & other forms of recreation.

How to keep Mental Health:
• Mental Health in school:
  4. Sex Education:
    – Helps to check on the alarming tendencies towards moral degradation because of sexual instincts.
  5. Educational Guidance:
    – Choose subjects according to their interests, needs, abilities & help solve educational problems.
    – Help cope with failures.
How to keep Mental Health:

• Mental Health in school:
  6. Personal Guidance:
  7. Vocational Guidance:
     – “Vocational Guidance is the process of assisting the individual to choose an occupation, prepare for it, enter upon and progress in it.” – National Vocational Guidance Association
     Help given to choose, enter and progress in the vocation.

• Mental Health in school:
  8. Formation of good habits:
     – Regarding regular life, balanced diet and exercise, good behaviour, high thinking etc.
  9. Balanced curriculum:
     – Help in all round development of the student’s personality. (methods & exams)
     – Include co curricular & extra curricular activities.

Thank You!
Unit: 3.4 Stress Management

(Session 14)
(Time 45 minutes)

Lesson Summary:
The lesson focuses on the concept and meaning of ‘stress’. It also deals with the concepts of ‘eustress’ and ‘distress’. Finally it concludes with the constructive approaches to reduce stress. The cooperative learning techniques used are ‘Think-Pair-Share’ in both the lead in and detailed study. For the extended activity ‘Numbered Heads Together’ technique is used.

Objectives:
- General Objective:
  - The student tells the meaning of stress and constructive approaches to reduce stress subsequent to working in groups or in pairs.
- Specific Objectives:
  - The student cooperates with his/her peers and tells the concept of stress while working in pairs.
  - The student tells the meaning of eustress.
  - The student differentiates between eustress and distress.
  - The student works in groups and explains constructive approaches to reduce stress.

Required Material:
- LCD Projector and Laptop for showing PPT slides to students.

Step by Step Procedure:
- Lead in:
  - The teacher divides the class into pairs and shows them pictures on PPT slides.
  - The teacher asks the students to describe the mental state of the individuals shown on the slides.
  - The teacher gives half a minute for the students to think individually and then a minute to discuss with their partners.
  - At random the teacher asks any pair to stand up and share their answers with the class. (Think-Pair-Share).
  - The teacher highlights that all the characters look stressed out due to over work.
  - The teacher links it to the topic of ‘stress and stress management.’

- Detailed Study:
  - The teacher asks the pairs ‘From which subject does the term stress originate?’
  - The teacher asks following questions to the students in pairs (Think-Pair-Share):
    - “What will happen to a violin’s string if it is too tightly strung?”
    - “How will the violin sound if its strings are too loose?”
    - The teacher links the violin’s string to the amount of stress and its effects on performance.
    - “What effects will stress have on one’s health?”
- After every question the teacher asks students to think individually at first, then discuss with their partners for a minute.
- The teacher randomly asks any pair to answer.
- The teacher discusses the answer and links it with the next questions while showing slides.
- The teacher explains the concepts of eustress and distress while showing the respective PPT slides.
- The teacher asks the pairs to give two examples each of eustress and distress.

○ **Extended Activity:**
- The teacher divides the class into groups of six students. Then each member of a group is allotted a number from one to six, which they are instructed to remember. (Numbered Heads Together)
- The students are distributed the following roles for each of the group members: leader, recorder, time keeper, encourager, organiser and noise checker.
- The teacher asks each group to write down at least five constructive approaches to reduce stress.
- At the end of ten minutes the teacher calls out at random a group number and a group member’s number. The group member has to share with the class their points.
- The teacher encourages other group members to share the points not given by the groups called out by the teacher.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher wraps up the activity by showing a few constructive approaches to reduce stress on the PPT slides.
Describe the mental state of these people.

3.4: Stress Management
Paper II Section I:
Psychology of Learning & Development

Think-Pair-Share
- Questions will be asked during this session
- Think about the answer individually for a minute
- Turn to your partner and discuss the answer
- Share the answer with the class if your pair is asked by the teacher

Stress - Meaning & Concept:
- Originated from Physics
- Refers to force exerted on a system that deforms, destroys or alters the structure of that system.
- The resulting change is called ‘strain’.
- Biology & Social Sc refers to – “state in which the vital functioning of the organism is threatened.”

Stress – Nature:
- When we do not have adequate capacity to deal with a problematic situation, we feel tense & experience stress.
- Every one has “stress tolerance” or “frustration tolerance”
- When the limit is crossed we get upset.
- E.g. violin string - too tight, it snaps; too lose, it won’t play music
- Prolonged stress can affect mental health & be a “silent killer”

Stress – Effect: Nervous System
- Debilitating/weakening affect on heart and Circulatory system.
- Stress message → Brain → nerve cells acts → pituitary gland → activates other organs → secretes hormones (adrenalin) → excites bodily systems & heart → increases blood pressure → Fight or Flight → heart works overtime → exerts pressure on arteries
Stress – Effect: Heart attacks
- If stress subsides the response dies.
- Body goes back to the state of equilibrium.
- If the stress continues it causes stress induced heart attack.

Eustress
- The prefix derives from the Greek ‘eu’ meaning either "well" or "good".
- **Eustress** is a term coined by endocrinologist Hans Selye (1974), as stress that is healthy, or gives one a feeling of fulfillment or other positive feelings.

Eustress
- The most effective functioning occurs at an optimum, not a minimum level of stress.
- If we are never challenged to our full capacities, we would be less effective and creative.

Distress
- **Distress** is the most commonly-referred to type of stress, having negative implications.
- If we overstretch ourselves hypertension takes place resulting in the negative effects of stress.

Constructive Approaches to reduce Stress:
- Avoid getting overtired, balance between rest & activity.
- Learn to say ‘no’ to things that will make you feel overburdened.
- Accept your limitations, you know yourself better than anyone.
- Get good quality of sleep.
Numbered Heads Together

Write down at least five constructive approaches to reduce stress.

Constructive Approaches to reduce Stress:
- Keep a “stress diary” to know the stress time in the week, so that you can involve in de-stressing activities.
- Take help from others to reduce stress.
- Exercise like walking or yoga.
- Get a hobby: Collecting stamps etc. bird watching etc.

Constructive Approaches to reduce Stress:
- Meditation
- Time management: It refers to a range of skills, tools, and techniques utilized to accomplish specific tasks, projects and goals.
- Listen to relaxing music

Conclusion:
“Stress is like electric power. It can make a bulb light-up & provide brilliant illumination. However, if the voltage is higher than what the bulb can take, it can burn out the bulb.”
Harihara Mahadevan.

Thank You!
Lesson Summary:
The lesson focuses on the identification and teachers’ role in catering to hearing impaired students. It is one of the subunits under the Unit Four ‘Psychology of Inclusion’. The Cooperative Learning technique used in the ‘Lead in’ activity is ‘Time Pair Share’. For the ‘Detailed Study’ the technique used is ‘Think Ink Pair Share’ and for ‘Extended Activity’ ‘Numbered Heads Together’ is conducted.

Objectives:
- General Objective:
  o The student tells how to identify hearing impaired students, their characteristics and teaching strategies to cater to their needs after working in pairs and groups.
- Specific Objective:
  o The student tells how difficult it is for a hearing impaired to communicate with others while doing a pair activity.
  o The student understands and tells how to identify hearing impaired students.
  o The student tells the characteristics of the hearing impaired.
  o The student tells the teaching strategies used to cater to the needs of hearing challenged students through the group work activity.
  o The student understands his or her role in the group and acts cooperatively to help their group answer the teacher’s questions.

Required material:
- Laptop and LCD to project the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher selects a pair of students and gives one partner a name of a movie to act out. The other partner has to guess the name of the movie in 3 minutes. (Timed Pair Share)
  - The teacher asks the pairs to share how they felt while doing the activity and links it to the difficulties faced by hearing impaired students while communicating with others.
- Detailed Study:
  - The teacher shows PPT slides with information regarding the different children with special needs.
  - The teacher also discusses the difference between impairment, disability and handicap while explaining the concepts.
- The teacher divides the class into pairs and asks them to write down any three ways to identify students with hearing impairment in the classroom. (Think Ink Pair Share)
- The teacher gives one minute for each student to think about the answer.
- The teacher gives three minutes for the pairs to discuss their answers and write down in their note books.
- The teacher asks randomly any pairs to share their answers.
- The teacher shows the PPT slides with the points and asks students to note them down.
- The teacher discusses the characteristics of the hearing impaired using PPT slides.

**Extended Activity:**
- The teacher divides the class into groups with six members according to their roll numbers. (Numbered Heads Together)
- The students are distributed the following roles for each of the group members: leader, recorder, time keeper, encourager, organiser and noise checker.
- Each group is given a number and each member in the group is given a letter from ‘A to F’.
- The teacher asks each group to write down any four activities the teacher can do in the classroom to cater to the needs of the hearing impaired.
- The teacher gives fifteen minutes for the groups to discuss.
- After the groups complete their discussion the teacher calls out a group number at random and any letter from ‘A to F’
- The student with the corresponding letter from the respective group shares the answer with the whole class.
- The teacher continues to call out for students from the rest of the groups.
- The students write down the points discussed in the class.
- After the students have answered they are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher concludes the session by showing the PPT slides with the answers and asks students to copy them in their books.
Identifying & Catering to Children with Special Needs. (Hearing Impaired)

Who are students with special needs?

- Special needs children are also known as exceptional children.
- An exceptional child is he who is different from those children who are average in physical, mental, emotional and social characteristics.
- “When we describe someone as exceptional we set that person apart from the average/normal people we know with respect to one or more characteristics.” - L.L. Schwartz.

Classification Of Students with Special Needs:

1. Hearing Impaired
2. Visually Impaired
3. Slow Learners
4. Physically Handicapped
5. Learning Disabled
6. Gifted
7. Mentally Retarded
8. Creative
9. Emotionally Disturbed

Hearing Impaired:

- Hearing Impairment may be defined as:
  - a defect in the hearing mechanism due to hereditary/environmental factors.
  - Owing to this impairment, the child cannot use his hearing for ordinary purposes.
  - Thus disabilities arises out of impairment.
  - Due to this the child cannot enjoy the normal process of hearing sounds.
  - This handicaps a child in hearing.

Hearing Impaired:

- Hearing impaired refers to a defect/damage to the hearing mechanism.

Causes

- Defects of inner part of the ear.
- Infection.
- Congenital defects.

Classification acc. to degree of hearing loss:

<table>
<thead>
<tr>
<th>Category</th>
<th>Range of hearing (in Decibels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>26-40 dB &amp; above</td>
</tr>
<tr>
<td>Moderate</td>
<td>41-55 dB &amp; above</td>
</tr>
<tr>
<td>Severe</td>
<td>56-70 dB &amp; above</td>
</tr>
<tr>
<td>Profound</td>
<td>71-90 dB &amp; above</td>
</tr>
<tr>
<td>Total Deafness</td>
<td>Can’t hear even above 100 dB</td>
</tr>
</tbody>
</table>

Can hear with hearing aids
Think Ink Pair Share
Write down any three ways to identify students with hearing impairment in the classroom.

How to identify the deaf child:
- Does not respond to sounds.
- Fiddles with the ear.
- Liquid oozes out from the ear.
- Asks for repetitions for instructions.
- Displays restlessness & inattentiveness.

How to identify the deaf child:
- Observable deformity.
- Complains any pain.
- Turns his head frequently to hear better.
- Focuses on the speakers face in order to understand speech.
- Asks peers to take notes dictated and later copies it down.

Characteristics:
- Language Development:
  - Most severely affected
  - Without extensive teaching they will not develop normal language.
- Intelligence:
  - Generally thought as low.
  - But it is similar to normal students only cognitive ability is affected in the language area.

Characteristics:
- Academic Achievement:
  - It varies in degrees, but it is generally less than normal students.
  - Hampered in reading & speaking skills.
- Social and Occupational Adjustment:
  - Different from others.
  - Social interaction depends on communication, thus affects social adjustment

Numbered Heads Together:
Write down any four activities the teacher can do in the classroom to cater to the needs of the hearing impaired.
Various ways of teaching:
- Sign language (ASL) American Sign Language.
- Lip reading.
- Finger spelling.
- Auditory training using hearing aids. (Mildly challenged).
- Total Communication Method.
  - Combination all means & methods.

Teaching Strategies:
- Give more visual inputs.
- Pronounce clearly with natural lip movements and gestures.
- Make them sit in front.
- Check if hearing aids are being used properly.
- Follow principle of speech reading & auditory training.

Teaching Strategies:
- Avoid speaking looking at the blackboard.
- Motivate them to ask questions.
- Give opportunity to participate acc. to their ability & interest.
- Consult with special tr. if unable to deal.
- Create cheerful atmosphere.
- Have a +ve attitude with love & attention.

Conclusion:
Blindness cuts one off from light, but deafness cuts one off from the people & the world.

Thank You
Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs.  
(Mentally Retarded)

(Session 16)
(Time 45+45 minutes)

Lesson Summary:
The focus of the lesson is the classification, characteristics, identification of the mentally retarded students. It also centres on the teacher’s role in catering to the needs of these students. For the ‘Lead in’ stage the Cooperative Learning technique used in ‘Think-Pair-Share’. During the ‘Detailed Study’ the technique used is the ‘Three Minute Review’ and for the ‘Extended Activity’ ‘Numbered Heads Together’ is used.

Objectives:
- General Objective:
  - The student tells how to identify mentally retarded students, their characteristics and teaching strategies to cater to their needs after working in pairs and groups.
- Specific Objectives:
  - The student tells the classification of the mentally retarded students
  - The student understands and tells how to identify mentally retarded students.
  - The student tells the characteristics of the mentally retarded students.
  - The student tells the teaching strategies used to cater to the needs of mentally retarded students through the group work activity.
  - The student plays his or her role in the group or in pairs and acts cooperatively to help in answering the teacher’s questions.

Required material:
- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher divides the class into pairs (Think-Pair-Share) and asks the following questions:
  - “Does mental retardation occur among animals? If so then why do we not see mentally retarded animals around us?”
  - The teacher gives one minute for each student to think of the answer
  - The students are given five minutes to discuss their answers with their partners and then share it with the class.
  - The teacher shows the PPT slide with the picture of the mentally retarded tiger and links it to the topic.

- Detailed Study:
  - The teacher discusses the classification of the mentally retarded with PPT slides.
- The teacher asks the following questions while showing the respective PPT slides:
  - “Describe the facial features of mongoloid children or children with Down’s Syndrome?”
  - “How does Down’s Syndrome occur in children?”
  - “Give examples of occupations that can be done by the trainable mentally retarded children.”
  - “What is the importance of the mother’s condition to the mental development of the baby?”
  - “What is meant by lead poisoning? How can it take place?”
- The teacher asks a student to review the different types of classifications (Three Minute Review)
- The teacher shows PPT slides about the causes of mental retardation.
- The teacher gives students ten minutes and asks students to match up the characteristics with the respective classifications with the help of their partners (Think Ink Pair Share)
- The teacher asks randomly three pairs to share their answers.

  ○ **Extended Activity:**
  - The teacher divides the class into groups with six members each according to the first letter in their names.
  - Each group is given a number and each member is also given a number to remember.
    (Numbered Heads Together).
  - Six roles are distributed amongst the members in each group i.e. leader, recorder, time keeper, encourager, organiser and noise checker.
  - The teacher asks each group to write down at least five activities that a teacher can do to cater to the needs of the mentally retarded students.
  - The groups are given fifteen minutes for the activity.
  - The teacher supervises the activity.
  - The teacher calls out at random a group number and then a number for the member of the group who is asked to share the answer with the whole class.
  - The teacher gives chance to all the groups to share their answers and allows the students to write down the points in their note books.
  - The teacher then shows the PPT slides with the answer and discusses it with the class.
  - All the students are given 5 minutes to discuss the following questions:
    ○ How they worked as a group?
    ○ What activities helped them to achieve their group goal?
    ○ What things should they avoid doing in the future activities?
- The teacher ends the session with the concluding PPT slide.
4.1 & 4.3
Identifying & Catering to Children with Special Needs. (Mentally Retarded)

Paper II Section I:
Psychology of Development & Learning

Meaning of Mentally Retarded:
“A mentally defective person is a person who is incapable of managing himself & his affairs on being taught to do so and who requires supervision control or external support.”- Benda C.E. (1954)

Think-Pair-Share

Does mental retardation occur among animals? If so then why do we not see mentally retarded animals around us?

It occurs among animals also
M.R. tiger

Classification of M.R. on the basis of:

Classification: Physical & Physiological characteristics:

- Brain damaged child:
  - Organic retardation due to brain damage/sickness

- Mongoloid:
  - Visible physical attributes, friendly, jolly, modest sometimes obstinate.

- Degree of retardation
- Degree of Independency
- Base on I.Q.
- Rate of learning & Educability
- Physical & Physiological Characteristics
Classification: Physical & Physiological characteristics:
- Cretin Child:
  - Disturbance in thyroid gland, can be cured, also jolly, friendly & modest.
- Cerebral Palsy:
  - Type of brain damage
  - Muscle activities are uncontrolled
  - Leads to muscular maladjustment.

Classification: Degree of retardation:
- Mildly retarded:
  - Underdeveloped intellectually
  - Can be trained & improved up to some limit.
- Moderately retarded:
  - Learn to speak, walk/ read very late, less grasping power.
  - Can be trained in manual skills.

Classification: Degree of retardation:
- Severely retarded:
  - Brain totally disturbed
  - Helpless in doing daily work, cannot be trained.

Classification: Degree of independency:
- Independent
  - Does own work without any help
- Partially independent:
  - Needs help for specific work
- Dependent:
  - Completely depend on others

Classification: On the Basis of I.Q. scores:
<table>
<thead>
<tr>
<th>Category</th>
<th>I.Q. range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idiot</td>
<td>0-25</td>
</tr>
<tr>
<td>Imbecile</td>
<td>25-50</td>
</tr>
<tr>
<td>Moron</td>
<td>50-75</td>
</tr>
<tr>
<td>Dull</td>
<td>75-90</td>
</tr>
</tbody>
</table>

Classification: Rate of learning & Educability:
- Slow learners:
  - I.Q. between 50-75
  - Speed is slow
  - Can be trained, socially adjustable, work independently, does not need special education, but requires special efforts from trs.
Classification: Rate of learning & Educability:
- **Educable:**
  - I.Q. between 50-75
  - Can be trained for writing, reading and main mathematical principle.

Classification: Rate of learning & Educability:
- **Trainable:**
  - I.Q. between 25-50
  - Late motor development
  - Can be trained in reading & writing (limited extent)
  - Ability to do handicraft, physical work, semi dependent

Classification: Rate of learning & Educability:
- **Totally uneducable & un trainable:**
  - Idiot children in this category
  - I.Q. less than 25
  - Are not self dependent
  - Can’t be taught
  - Kept in residential institutions with full time nurses.

Causes of M.R:
- **Toxic agents:**
  - Mother suffering from diseases like German measles, syphilis, virus infection etc. during pregnancy cause poisonous material.

Causes of M.R:
- **Drugs:**
  - Mother a drug addict like LSB, heroin
  - Drugs taken for abortion
  - Alcohol, smoking indirectly causes premature birth & also M.R.

Causes of M.R:
- **Radiation:**
  - Exposure to too much of radiation, tension, high blood pressure, diabetes, improper diet, blood defects causes M.R.

Causes of M.R:
- **Genetics & Metabolism**
  - Down's syndrome: 47 genes in place of 46 in the structure of the 21\(^{st}\) genes due to abnormality
  - Metabolic defects like Fenilkite- Urea
  - Physical & Mental Health of the mother

Causes of M.R:
- **Premature birth**
- **Complications during pregnancy**
- **Acute illness:**
  - Typhoid, measles, pox etc. may damage the brain.
- **Traumatic illness:**
  - Affecting the central nervous system
Causes of M.R:
- Lead poisoning:
  - Accidentally eats paints, colour on toys etc.
- Accidental Brain injury:
- Deprived environment:
  - Low socio-economic status-
    malnutrition, unhygienic conditions, insufficient resources

Characteristics:
- Organic characteristics:
  - Have physical disabilities like deafness, blind, impairment of muscle adjustment.
- Physical characteristics:
  - Generally unhealthy- illiterate parents, low socio-economic status.

Characteristics:
- Mental characteristics:
  - I.Q. 75 and below
  - Can’t do average work
  - Slow in memory, generalization, conceptualization, perception, language ability, imagination & other higher mental processes

Characteristics:
- Educational Characteristics:
  - Backward by 2-3 yrs. from normal
  - Unable to grasp easily
  - Learn to read, write, solve simple sums.

Characteristics:
- Personal & Social Characteristics:
  - Short attention span
  - Lack creativity
  - Less tolerant to frustration
  - Play with children of lower age
  - Are problem children in behaviour

Characteristics:
- Occupational characteristics:
  - Unable to do highly skilled work
  - Can do semi skilled jobs
  - Can do unskilled work/ physical labour.
Educational Programmes/Trs. role:

- **Class size** should be limited to less than 15
- Use **modern equipments** like T.V., music system, A.V. aids. Well **decorated & ventilated classrooms**.
- **Special curriculum**: Easy, simple, interesting, exciting, practical & vocational

Think Ink Pair Share

Match up the characteristics with the respective classifications with the help of your partners.

**Numbered Heads Together:**

Write down at least five activities that a teacher can do to cater to the needs of the mentally retarded students.

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Educational Programmes/Trs. role:

- **Methods of teaching**:
  - Repetition and practice
  - Lessons easy & practical
  - Avoid theoretical & philosophical analysis
  - Draw attention by using familiar e.g. garden, colony, town, country etc.
  - Use pictures, stories, colourful aids
  - Small portion of the lessons at a time

Educational Programmes/Trs. role:

- **Avoid prejudice**

Teaching Staff:

- Specially trained teachers
- Supervisors
- Psychologists: diagnosis, assessment, training acc. to psychological theories.
- Psychiatrist: studies maladjustment, analyses diseases, gives remedies.
- Vocational counsellor

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Conclusion:

- The M.R. should be given proper training & guidance to help them lead a happy and independent life & not be considered as a burden to the society.
- It is the moral duty of every nation & society to make proper provisions and arrangements for the M.R. children.

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Thank You
Lesson Summary:

The lesson focuses on the characteristics of the gifted and educational programmes and the teacher’s role that cater to their needs. The Cooperative Learning techniques used are: ‘Lead in’ stage ‘Pairs Compare’; ‘Detailed Study’ stage ‘Circle the Sage’ and ‘Extended Activity’ stage ‘Numbered Heads’ is conducted.

In the present lesson the Pre Service Teachers who went to Jnana Probodini school which is a special school catering to the gifted children were considered as the Sages.

Objectives:

- General Objective:
  - The student tells the characteristics of the gifted students and the educational programmes and the teacher’s role that cater to their needs while working in pairs and groups.

- Specific Objectives:
  - The student tells the difference between divergent and lateral thinking after solving the puzzles.
  - The student describes the characteristics of the gifted students.
  - The student asks questions to their peers and organises their answers.
  - The student cooperates and performs their roles while working in pairs and groups to answer the teacher’s questions.

Required material:

- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:

- **Lead in:**
  - The teacher shows the PPT slide with the puzzle and asks students to solve it in ten minutes.
  - The teacher divides the class into pairs and asks the partners to compare their answers and discuss with the class. (Pairs Compare)
  - The teacher shows the distribution of I.Q. on the PPT slide and introduces the topic.

- **Detailed Study:**
  - The teacher selects the Sages in the class. The Sages are the students who had gone to Jnana Probodini School for their Internship earlier.
  - The teacher divides the class into groups with a Sage in each group.
  - The teacher asks the group members to interview the Sage and find out the characteristics of the gifted students.
- The teacher gives twenty minutes for the discussion.
- After the groups are ready the teacher asks each group to share their information obtained from their respective Sages.
- The teacher shows the PPT slide with the characteristics of gifted students.
- The teacher shows a puzzle on the PPT slide and asks the groups to solve them. The teacher gives the students five minutes to solve it.
- The teacher asks the groups to share their solutions with the class.
- The teacher shows the PPT slide and links divergent thinking with the puzzle on PPT slide.
- The teacher shows another puzzle on the PPT slide and gives the student fifteen minutes to solve it.
- The teacher asks if any group has solved it and share it with the class.
- The teacher shows the PPT slide and discusses lateral thinking.
- The teacher shows the PPT slide and describes the educational programmes and enrichment programmes to cater to the needs of the gifted students.

**Extended Activity:**
- The teacher gives numbers to the groups and numbers to each member in every group. (Numbered Heads).
- Six roles are distributed amongst the members in each group i.e. leader, recorder, time keeper, encourager, organiser and noise checker.
- The teacher asks each group to write down at least five activities that a teacher can do to cater to the needs of the gifted students.
- The groups are given fifteen minutes for the activity.
- The teacher supervises the activity.
- The teacher calls out at random a group number and then a number for the member of the group who is asked to share the answer with the whole class.
- The teacher gives chance to all the groups to share their answers and allows the students to write down the points in their note books.
- The teacher then shows the PPT slide with the answer and discusses it with the class.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher concludes the session.
4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Gifted)

Paper II Section I: Psychology of Development & Learning

Make the same shovel, no longer containing the coin, by moving only two sticks.

Introduction:
“The talented or gifted child is one who shows consistently remarkable performance in worthwhile line of endeavor.”
- Havighrust

Circle the Sage:
• Students who went to Jnana Probodini School for their Internship will act as sages.
• A group will be allotted to them.
• Group members have to ask their respective sages the following question:
• What are the characteristics of the gifted students?

Characteristics:
• I.Q. is greater than 140
• Very superior reasoning ability.
• Greater intellectual capacity and curiosity.
• Have unusual imagination.
• Indulge in divergent thinking and lateral thinking.
Connect these nine dots with just 4 straight lines

Divergent Thinking: Multiple answers to one question.

Connect these nine dots with just 4 straight lines without lifting your hand


Characteristics:
- Can memorize very easily.
- Large span of attention/ high concentration.
- Perceiver in problem solving and in pursuing their interest.
- Wide variety of interests.
- Superior verbal capacity (vocabulary) due to rapid and extensive reading.

Characteristics:
- Capable of doing independent work.
- Can follow complex instructions.
- Get bored with normal teaching or routine work.
- Resort to easy success tactics.
- Could get notorious in class.
**Numbered Heads:**

Write down at least five activities that a teacher can do to cater to the needs of the gifted students.

**Educational Programmes:**

- **Annual promotion system:** Double promotion
- **Ability grouping:** Child proceeds at his own pace.

These have been discarded as they result in unfavourable psychological development.
- **Enrichment Programmes** - universally accepted as the method of teaching gifted children.

**Enrichment Programmes:**

- Special assignments (in/out of syllabus).
- Work on independent projects.
- Preparing reports & participation in panel discussion.
- Visits to place to get first hand information.
- Prepare models, improvise apparatus used for teaching.

**Teacher’s Role:**

- Accept diverse and unusual questions and answers.
- Accept unusual opinion.
- Should be himself/ herself intellectually curious.
- Avoid being bias. Treat everyone equally.

**Enrichment Programmes:**

- Participate in organizing co-curricular & extra-curricular activities.
- Independent Library reading
- Involve in experimentation and independent research.
- Accept diverse and unusual questions and answers
Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs.
(Slow Learners)

(Session 18)
(Time 45 minutes)

Lesson Summary:
The focus of the lesson is the characteristics of the slow learners and the educational Programmes for catering to their needs. For the ‘Lead in’ stage the Cooperative Learning technique used is ‘Three Minute Review’. ‘Think-Pair-Share’ is used during the ‘Detailed Study’ and ‘Round Table Technique’ is conducted for the ‘Extended Activity’.

Objectives:
- General Objective:
  - The student tells the characteristics of the slow learners and the educational programmes to cater to their needs.
- Special Objectives:
  - The student identifies slow learners as a category under mentally retarded children.
  - The student describes the characteristics of the slow learners.
  - The student tells the educational programmes for catering to the slow learners.
  - The student cooperatively works in pairs and groups to answer the questions asked by the teacher.

Required material:
- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:
- **Lead in:**
  - The teacher asks the students to give the different classifications of the mentally retarded students. (Three Minute Review)
  - The teacher links slow learners as a category under mentally retarded.

- **Detailed Study:**
  - The teacher divides the class into pairs and asks questions to the students. (Think-Pair-Share)
  - The teacher gives one minute for the students to think individually for each question.
  - The teacher then gives two minutes for the students to discuss their answers for each question and then share it with the class. The teacher uses this technique for following questions on the respective PPT slides.
  - The teacher shows PPT slide no. 3 and asks:
    - “What is the meaning of abstraction and generalization?”
  - The teacher shows PPT slide no. 4 and asks:
    - “What is the meaning of local view point?”
- The teacher shows PPT slide no.5 and asks:
- “Give examples of other higher mental processes.”

○ **Extended Activity:**
  - The teacher divides the class into groups of six members each.
  - The groupings are done according to the second letter in the surnames of the students.
  - The students are given fifteen minutes to rotate a book amongst their group and each member has to write down an activity to cater to the needs of the slow learners. (Round table technique).
  - The teacher supervises the activity and clears any doubt of the students.
  - At the end of fifteen minutes the teacher asks each group to share their answers with the class. The students are asked to note down the points.
  - The teacher shows PPT slide no. 7 to 9 and discuss the educational programmes in detail.
  - All the students are given 5 minutes to discuss the following questions:
    ○ How they worked as a group?
    ○ What activities helped them to achieve their group goal?
    ○ What things should they avoid doing in the future activities?
- The teacher concludes the session by showing the references.
4.1 & 4.3

Identifying & Catering to Children with Special Needs. (Slow Learners)

Introduction:

- Slow learners:
  - I.Q. between 50-75
  - Speed is slow
  - Can be trained, socially adjustable, work independently, does not need special education, but requires special efforts from trs.

Characteristics of Slow learners:

- Short attention & concentration span.
- Slow reaction time.
- Limited ability to evaluate materials for relevancy.
- Limited powers of self direction.
- Limited ability to work with abstractions & to generalize.

Characteristics of Slow learners:

- Failure to recognise familiar elements in new information.
- Habits of learning very slowly & forgetting very quickly.
- Very local point of view.
- Inability to set up & realise standard of workmanship.
- Lack of originality & creativeness.

Characteristics of Slow learners:

- Slowness to form association between words & phrases.
- Inability to analyse, to do problem solving, or think critically.
- Lack of power to use the higher mental processes.

Round Table Technique:

Write down an activity to cater to the needs of the slow learners.
**Educational programmes:**

- Special classes: partial not total segregation.
- Short assignments: break assignments into small units.
- Give more drill work.
- Summaries: frequently discuss important points as summaries.
- Praise: occasional praise for doing assignments well.

**Educational programmes:**

- Proper evaluation: good set of tools should be used.
- Close supervision
- Use audio visual aids to facilitate learning.
- Encourage creative expression with hands.
- Diagnostic tests should be frequently administered.
- Remedial teaching: remedial trs. may be appointed who come and meet the students twice a week.

**Educational programmes:**

- Curriculum according to interest: selected by students with the help of the counsellors on the basis of aptitude, interest and need.
- Vocational programme: don’t force any vocation on the slow learners. Such children don’t always have the aptitude to acquire vocational skills
- Equality of opportunity in recreational programme: sports, music, art, dramatics etc.

**References:**

- A textbook of Educational Psychology- Bhatia & Bhatia
Lesson Summary:
The focus of the lesson is identifying and catering to children with visual impairment. This subunit comes under Unit Four ‘Psychology of Inclusion’. The ‘Lead in’ activity is done by using a ‘Think-Pair-Share’ cooperative learning technique. In the ‘Detailed study’ the students work in groups using the ‘Round table technique’ cooperative learning techniques. The ‘Numbered Heads Together’ is used in the ‘Extended Activity’.

Objectives:
- General Objective:
  o The student tells how to identify visually impaired students, their characteristics and teaching strategies to cater to their needs after working in pairs and groups.
- Specific Objectives:
  o The student tells how difficult it is for a visually challenged or impaired to describe a picture while doing a pair activity.
  o The student understands and tells how to identify visually impaired students.
  o The student tells the characteristics of the visually impaired.
  o The student tells the teaching strategies used to cater to the needs of visually challenged students through the group work activity.
  o The student understands his or her role in the group and acts cooperatively to help their group answer the teacher’s questions.

Required material:
- LCD projector and Laptop to show the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher divides the students into pairs. The teacher instructs all the students from each pair seated on the left side have to close their eyes.
  - The teacher then shows a picture on the slides. The students from each pair seated on the right side have to describe the picture to their respective partners whose eyes are closed. One minute is given to them.
  - The teacher asks all the students to open their eyes and asks at random any pair “Were you able to visualise exactly what you see on the picture?” and “Was it easy to describe the picture to your partner, whose eyes were closed?”(Timed Pair Share)
  - The same activity is done with the roles of the pairs being reversed. The teacher shows another picture.
  - The teacher asks questions, “How did you feel when you could not see the picture?” and “How do you feel now that you can open your eyes and see the picture?”(Timed Pair Share)
- The teacher states that the current lesson will be dealing with the visually challenged students.

○ **Detailed Study:**
- The teacher divides the class into groups of six members. The groups are made according to the month they were born in. A group may consist of members born in January and February and so on.
- Each group is asked to discuss and write down answer to the question, “How will you identify a visually challenged student in your class?” (Round table technique).
- Each member of the group has to write down a point on a paper circulated within the group and read it aloud. Then the group members discuss the points written and organise the answer. The teacher gives them five minutes to complete their activity.
- The teacher randomly selects any of the groups to read out their points.
- The teacher also encourages other group members to add in new points after one group discusses their answer.
- The teacher shows the slide with the points to summarize. Time is given for the students to write down the points obtained from the group work in their books.
- The teacher explains and shows slides with different types of visual defects and the characteristics of visually challenged.

○ **Extended Activity:**
- Each member of a group is allotted a number from one to six, which they are instructed to remember. (Numbered Heads Together)
- The students are distributed the following roles for each of the group members: leader, recorder, time keeper, encourager, organiser and noise checker.
- Each group is asked to note down teaching strategies to cater to either of the following areas of development:
  ○ Language development
  ○ Mobility
  ○ Academic Achievement
  ○ Tactile ability
  ○ Social interactions.
- The teacher gives ten minutes for the group to discuss.
- The teacher calls out a number for a group and another number between one to six, for the group member.
- The student is asked to share the group’s answer with the class.
- After the students have answered they are given 5 minutes to discuss the following questions:
  ○ How they worked as a group?
  ○ What activities helped them to achieve their group goal?
  ○ What things should they avoid doing in the future activities?
- Finally the teacher discusses the points with the whole class and allows students to write down the points in their note books.
Timed Pair Share

- “How did you feel when you could not see the picture?”
- “How do you feel now that you can open your eyes and see the picture?”

4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Visually Impaired)

Paper II Section I:
Psychology of Learning & Development

Round table technique:

“How will you identify a visually challenged student in your class?”

Identification:
- Rubs the eyes extensively.
- Watering of eyes.
- Holds books/other objects very close to the eyes.
Identification:
- Always asks peers when coping notes from the blackboard.
- Blinks a lot.
- Bumps into objects/things.
- Very sensitive to light & prefers to be in dark places.
- Squinting to read from blackboard.

Main defects of the eyes:
- Short-sightedness
  - Can’t see objects at a distance.
  - Use spectacles with concave lenses.
- Long-sightedness
  - Hold object further than normal to see clearly.
  - Use spectacles with convex lenses.
- Colour blindness
- Blindness

Characteristics:
- Language Development:
  - More motivated to use language than a sighted child as it is his main means of communication.
- Intellectual Ability:
  - Could be less than sighted.
  - Difficulty in understanding spatial concepts & distance.
- Tactile:
  - Very developed sense of touch.

Characteristics:
- Mobility:
  - Varies acc. to the degree of blindness.
  - Mobility training is very important.
- Academic achievement:
  - Slightly lower than normal students.
  - As Visual experience is not present achievement is low.
  - Better as compared to hearing impaired.

Teaching Strategies:
- Give more auditory inputs.
- Pronounce clearly with proper intonation.
- Make them sit in front.
- Check if they are using their spectacles properly.
- Make them use text books with large print.
- Provide books in Braille.
Teaching Strategies:

- Provision for using magnifying glasses and close circuit televisions.
- Motivate them to ask questions.
- Give opportunity to participate acc. to their ability & interest.
- Have a +ve attitude with love & attention.
- Audio cassettes/ CDs in the library.
- Talking calculators.
- Tape recorders
Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Learning Disabled)

(Session 20)
(Time 45+45 minutes)

Lesson Summary:
The lesson centres on the concept of the ‘Learning Disabled’, its types, identification and teaching strategies to cater to the learning disabled children. The session uses the ‘Think-Pair-Share’ Cooperative Learning technique during all the ‘Lead in’ stage and ‘Think Ink Pair Share’ during the ‘Detailed Study’ and ‘Extended Activity’.

Objectives:
- General Objective:
  - The student work in pairs and tells the characteristics along with how to identify children with learning disability, their types, characteristics of children with dyslexia and dyscalculia and teaching strategies to cater to their needs.
- Specific Objectives:
  - The student understands and describes the characteristics of the learning disabled children.
  - The student tells how difficult dyslexics find it to read texts.
  - The student classifies the types of learning disabled children.
  - The student describes the ways to identify children with dyslexia and dyscalculia.
  - The student explains the teaching strategies used to cater to the needs of the dyslexics and dyscalculics.
  - The student cooperates with his/her partner and performs their roles while working in pairs to find the answers to the teacher’s questions.

Required material:
- Laptop and LCD projector to project the PPT slides during the lesson.

Step by Step Procedure:
- **Lead in:**
  - The teacher divides the class into pairs. The teacher introduces the topic by showing PPT slide no. 2.
  - The teacher asks questions to the pairs. The students are first given a minute to think individually and then given two minutes to discuss with their respective partners. Finally the teacher asks at random any pairs to share their answer with the whole class. (Think-Pair-Share).
  - The teacher asks the pairs to identify the key words in the definitions of learning disabled.
  - After the pairs share their answer with the whole class the teacher links it with the characteristics of the learning disabled.
Detailed Study:
- The teacher shows the PPT slides with the characteristics of the learning disabled.
- The teacher asks “Why are the learning disabled children emotionally unstable and moody?”
- “Why do these students have problem with their memory?”
- The teacher shows the PPT slide and discusses the causes.
- The teacher then shows PPT slide no. 6 and ask the pairs to read aloud paragraph and write it in their note books. The teacher gives the students three minutes to do the activity (Think Ink Pair Share).
- The teacher asks randomly a pair to share their answer with the whole class.
- The teacher shows PPT slide no. 7 and explains how difficult the dyslexics find to read letters in texts.
- The teacher shows PPT slide no. 8 and 9 and explains the types of learning disabilities.
- The teacher shows PPT slide no. 10 with ways to identify students with learning disabilities.
- The teacher asks the pairs to write down the letters and numbers that have mirror images and can cause confusion for the learning disabled.
- The teacher shows PPT slide no. 11 with the answers.
- The teacher shows PPT slide no. 12 to 14 to identify children with dyscalculia.
- The teacher asks “which are the everyday activities that use numbers?”
- The teacher emphasises the difficulties of the dyscalculic children with respect to time and money transactions.

Extended Activity:
- The teacher asks the pairs to write down at least four activities each for dyslexic and dyscalculics that they would do in order to cater to their needs. (Think Ink Pair Share).
- The students are given four minutes to think individually.
- Then the teacher gives twenty minutes to the students to write down the activities while discussing in pairs.
- The teacher asks randomly pairs to share their answers with the whole class.
- The teacher shows slide no. 16 to 22 while discussing the answer.
- The teacher asks the pairs to identify the pictures of personalities who were dyslexics and dyscalculics on the PPT slide no 23 and 24
- The teacher then concludes by emphasising that people can overcome these conditions and still be great contributors to the society.
- The teacher gives five minutes to the whole class to discuss with their partners the following questions:
  - How they worked as a pair?
  - What activities helped them to achieve their common goal?
  - What things should they avoid doing in the future activities?
4.1 & 4.3
Identifying & Catering to Children with Special Needs. (Learning Disabled)

Paper II Section I:
Psychology of Learning & Development

Definition:

• “A child with learning disabilities is one with adequate mental ability, sensory processes & emotional stability who had a limited no. of specific deficits in perceptual, integrative/expressive processes which severely impair learning efficiency.”

• “This includes children who have central nervous system dysfunction which is expressed primarily in impaired learning efficiency.” Association of Children with Learning Disabilities (1967)

Characteristics of LD children:

• Have normal I.Q. of 90-110
• Hyperactive
• Perceptual motor impairments
• Emotionally unstable, moody
• General coordination deficits

Characteristics of LD children:

• Disorders of attention
• Disorders of memory & thinking
• Specific academic problems in reading, writing, spellings & numbers
• Disorders in speech & learning
• Equivocal neurological signs

Causes:

• Neurological dysfunctioning
• Environmental factors- bad diet, exposure to pollution or food contamination, fetal exposure to pollution.
• Inadequate instructions- being pushed to upper classes without understanding.

Read the following paragraph:

Susa
nsaidlet seat some dobc orn forsow etimea
ndla terw ecau eats owei cecr eams
Johon
asvery abby auds artebeating thed obc
orns giv auto himp y sus anpo thw
erevery ha bby audh abalovel tme.
This is what we read when we see the same paragraph:

Susan said, “Let’s eat some popcorn for sometime and later we can eat some ice cream.” John was very happy and started eating the popcorns given to him by Susan. Both were very happy and had a lovely time.

Types of LD:

- **Dyslexia:** Language problem
  - Errors in reading
  - Speech development
  - Articulation

- **Dysgraphia:** Impairments in
  - Handwriting
  - Spelling
  - Organization of ideas
  - Composition

- **Dyscalculia:** Math disability
  - Learning math concepts (time, quantity, Place value)
  - Memorizing maths Facts
  - Organising nos.
  - Understanding problems

**Type of LD: Dyspraxia:**

- Difficulty with single step tasks such as
  - Combing hair or waving goodbye
- Difficulty in multi-step tasks
  - Brushing teeth or getting dressed
- Difficulty in establishing spatial relationships such as being able to accurately position one object in relation to another

**Identification of LD:**

- Find it difficult to organise their work properly.
- Miss out on a word/ line generally
- Sometimes read their words backwards
- Write letters in wrong order ‘felt’ as ‘left’, ‘cat’ as ‘act’ etc.
- Shorten the words as they don’t know the spelling.
- Lots of errors in written work.
- Confuse between letters and numbers

**Identifying Dyscalculia**

- Shows difficulty understanding concepts of place value, and quantity, number lines, positive and negative value, carrying and borrowing
- Has difficulty understanding and doing word problems
- Has difficulty sequencing information or events
- Exhibits difficulty using steps involved in math operations

**Identification of LD:**

- Confuse between letters & numbers
- Causing calculation mistakes
- Hence they have a lot of difficulty in language skills.
- They have difficulty in academic subjects.
- Sometimes show deficiency in one subject or a combination of subjects
Identifying Dyscalculia (cont..)

- Shows difficulty understanding fractions
- Is challenged making change and handling money
- Displays difficulty recognizing patterns when adding, subtracting, multiplying, or dividing
- Has difficulty putting language to math processes

Identifying Dyscalculia (cont…):

- Has difficulty understanding concepts related to time such as days, weeks, months, seasons, quarters, etc.
- Exhibits difficulty organizing problems on the page, keeping numbers lined up, following through on long division problems

Think Ink Pair Share:

Write down at least four activities each for dyslexic and dyscalculics that they would do in order to cater to their needs.

Role of the Teacher:

- Interventions include:
  - Mastery model:
    - Learners work at their own level of mastery.
    - Practice
    - Gain fundamental skills before moving onto the next level
  - Note: this approach is most likely to be used with adult learners or outside the mainstream school system.

Role of the Teacher:

- Classroom adjustments:
  - Special seating assignments
  - Alternative or modified assignments
  - Modified testing procedures
- Special equipment:
  - Electronic spellers and dictionaries
  - Word processors
  - Talking calculators
  - Books on tape

Role of the Teacher:

- Classroom assistants:
  - Note-takers
  - Readers
  - Proofreaders
- Special Education:
  - Prescribed hours in a special class
  - Placement in a special class
  - Enrollment in a special school for learning disabled students
Teaching Strategies for Dyscalculia:
- Allow use of fingers
- Use diagrams and draw math concepts
- Provide peer assistance
- Suggest use of graph paper
- Suggest use of colored pencils to differentiate problems

Teaching Strategies
- Draw pictures of word problems
- Use mnemonic devices to learn steps of a math concept
- Use rhythm and music to teach math facts and to set steps to a beat
- Schedule computer time for the student for drill and practice

Teaching Strategies
- Students can read the problem out loud as their auditory skills may be an academic strength.
- Use real-life situations for math concepts whenever possible.
- Remove unnecessary clutter from worksheets such as pictures and words that are not needed for problems.
- Allow extra time to complete assignments.

Conclusion:
- Many dyslexics have overcome their disadvantage and have become accounts, surgeons, architects etc.
- Even world acclaimed super intellects were identified as dyslexics.

Famous personalities with Dyscalculia:
- Benjamin Franklin
- Albert Einstein
- Hans Christian Anderson

Thank You
Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Physically Challenged)

(Session 21)
(Time 45+45 minutes)

Lesson Summary:
The focus of the lesson is the concept of the ‘Physically Challenged’ children, the categories with their causes, the characteristics and facilities with activities to cater to their needs. The Cooperative Learning techniques used are ‘Think-Pair-Share’ for the ‘Lead in’ stage, ‘Think Ink Pair Share’ for the ‘Detailed Study’ and ‘Round Table’ for the ‘Extended Activity’.

Objectives:
- General Objective:
  - The student tells the causes, types, characteristics of the physically challenged, facilities and activities for catering to the needs of the physically challenged children.
- Specific Objectives:
  - The student tells the causes of physically challenged condition.
  - The student classifies the types the physically challenged.
  - The student describes the characteristics of the physically challenged.
  - The student explains the facilities and activities for catering to the needs of the physically challenged students.
  - The student understands and performs his/her role cooperatively while working in pairs and groups to answer the teacher’s questions.

Required material:
- Laptop and LCD projector to project the PPT slides during the lesson.

Step by Step Procedure:
- **Lead in:**
  - The teacher divides the class into pairs, shows PPT slide no. 2 and asks:
  - “What are the causes for becoming physically challenged?”
  - The teacher gives one minute for the students to think individually. (Think-Pair-Share).
  - The teacher gives five minutes for the students to discuss with their partners and organize their answers.
  - The teacher calls out pairs at random to share their answers with the whole class.
  - The teacher shows PPT slide no. 3 with the answer and introduces the topic.
- **Detailed Study:**
  - The teacher shows PPT slide no. 4 to 7 and explains the types of the physically challenged with their causes.
- The teacher asks the pairs “Write down the general characteristics of the physically challenged under the following heads: Cognitive, Academic, Physical and behavioural aspects.” (Think Ink Pair Share)
- The teacher gives a minute for the students to think about the answer individually.
- The teacher gives ten minutes for the students to discuss with their partners and write down the points in their note books.
- The teacher asks randomly a few pairs to share their answer with the class.
- The teacher shows PPT slide no. 9 to 10 with the answer and discusses them in detail.

○ **Extended Activity:**
- The teacher joins three pairs of students to form a group of six students and asks them:
  - “Write down the facilities and activities that can be done in school to cater to the needs of the physically challenged students.” (Round Table)
- The teacher gives twenty minutes for the students to rotate a book within a group for each member to write down a point related to the question.
- The teacher supervises the activity and clears doubts among the students.
- At the end of the activity the teacher asks each group to share their answer with the class. The students are given time to note down the points.
- The teacher shows the PPT slide no. 12 to 14 and discusses the answer with the class.
- The teacher gives time to the students to copy it in their note book.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher concludes the session by showing the PPT slide no. 15 with the role of the teacher.
4.1 & 4.3
Identifying & Catering to Children with Special Needs. (Physically Challenged)

Think-Pair-Share:
- What are the causes for becoming physically challenged?
  - Think about it
  - Discuss with your partner
  - Share it with the class.

Physically Challenged:
- Problems that result from injuries or conditions affecting the central nervous system or other body systems and their related functions.
- These affect the way the child uses his/her body.

Categories:
- Orthopedic Impairments
- Traumatic Brain injuries

Orthopedic Impairments:
- Impairments caused by:
  - congenital abnormalities (clubfoot, absence of a member of the limb)
  - Diseases (bone tuberculosis)
  - Neurological problems, cerebral palsy, epilepsy (seizures), amputation, fractures, burns.
- They affect functioning of muscular, skeletal and central nervous system resulting in difficulty in movement and mobility.

Traumatic Brain injuries:
- Impairments caused by:
  - Falls, sports & recreational related accidents, motor accidents, personal assaults, child abuse, birth trauma.
- Characteristics/Symptoms:
  - Has sever headaches
  - Loses consciousness
  - Changes in speech or other bodily functions.
  - Becomes lethargic
  - Confused & irritable.
Autism:
- Rare disorder
- Affects multiple areas including thought, communication, & behaviour
- Characteristics: disturbances in
  - Developmental rates/sequence
  - Responses to sensory stimuli
  - Speech (repeats words & phrases), language, cognitive capacities
  - Capacities to relate to people, events & objects.

Think Ink Pair Share:
- Write down the general characteristics of the physically challenged under the following heads: Cognitive, Academic, Physical, and Behavioural aspects.
  - Think about it
  - Discuss with your partner and list down the points.
  - Share it with the class.

General characteristics:
- Cognitive:
  - May include mental retardation
  - Students with motor/speaking difficulties often have no cognitive impairments.
- Academic:
  - Experience academic difficulties
  - Limited learning opportunities cause the difficulties.
  - Medicines may cause inattentiveness, hyperactivity, drowsiness and withdrawn behaviour.

General characteristics:
- Physical:
  - Chronic illness, weakness and pain
  - Have problems in coordination & movement
  - May develop extraordinary physical strength
- Behavioural:
  - Social and emotional development depends on the attitude of others and the opportunities for interaction.
  - Should be trained in self care skills to develop a positive attitude.

Round Table Technique:
- Write down the facilities and activities that can be done in school to cater to the needs of the physically challenged students.
  - Rotate a notebook within your group.
  - Each member has to write a point to build up the answer.
  - Organize the answer.
  - Select a leader and share the answer with the class when the teacher asks your group.

Catering to their needs:
- Removing architectural obstacles:
  - Ramps
  - Doors at least 32” wide
  - Toilets - Western style
  - Water fountains
- Limit their responses to one word/multiple choice item requiring minimal writing
- Placing rubber strips or pad on work material to prevent slipping
Catering to their needs:

- Using word processors, computers, typewriters, calculators - use less writing.
- Using study buddies in activities requiring extensive writing.
- Tr. must know the cause of the disability and the functioning of the required equipments for educating these students.
- Books on tapes help students who cannot hold books and read.

Catering to their needs:

- Tape the writing paper to the desk to keep it from moving or falling down.
- Attach the pen/pencil to the desk with a string.
- Give assignments that can be typed on computers.
- Use buddy system to get handouts & assignments to his desk.
- Give extra time to complete class work.

Conclusion:

- These children can be successfully educated in an inclusive set if the following conditions are satisfied:
  1. Trs. want these children in their classes
  2. Trs. are willing & able to teach and care for these students
  3. Trs. accept support from professional with relevant expertise.
- Thus the role of the teachers in accepting these children is very crucial.

Don't Legislate Educate!
Unit: 4.2. Need of special education

Lesson Summary:
The lesson highlights the concept of ‘Special Education, Children with Special needs, the categories and the need for Special Education. The Cooperative Learning techniques used are ‘Think-Pair-Share’ for the ‘Lead in’ stage, ‘Formulate, Listen, Share and Create’ for the ‘Detailed Study’ and ‘Numbered Heads Together’ for the ‘Extended Activity’.

Objectives:
- General Objective:
  - The student tells the concept of Special Education, Children with Special Needs and the need for Special Education.
- Specific Objectives:
  - The student tells the concept of Special Education.
  - The student states the concept of children with special needs.
  - The student classifies and draws the types children with special needs.
  - The student discusses with his/her peers and notes down the need for special education.
  - The student cooperates with his/her partner and performs their roles while working in pairs to find the answers to the teacher’s questions.

Required material:
- Laptop and LCD projector to project the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher divides the class into pairs, shows PPT slide no. 2 and asks:
  - “Identify the main terms in the definition”
  - The teacher gives one minute for the students to think individually. (Think-Pair-Share).
  - The teacher gives five minutes for the students to discuss with their partners and organize their answers.
  - The teacher calls out pairs at random to share their answers with the whole class.
  - The teacher links the answers with the topic.
- Detailed Study:
  - The teacher shows PPT slide no. 3 and 4 to explain the concept of special education.
  - The teacher divides the class into triads and shows them PPT slide no. 5 and asks:
  - “Classify and draw a diagram showing the challenges under their respective categories.”(Formulate, Listen, Share and Create).
  - The teacher gives student ten minutes to draw the concept map.
  - The teacher then asks at random any group to explain their concept map.
- Other groups are encouraged to give rectify any errors in classifications.
- The teacher shows PPT slide no. 6 with the answer and discusses them in detail.

  o **Extended Activity:**
  - The teacher joins two triads of students to form a group of six students
  - Each member of a group is allotted a number from one to six, which they are instructed to remember. (Numbered Heads Together)
  - The students are distributed the following roles for each of the group members: leader, recorder, time keeper, encourager, organiser and noise checker.
  - The students are given 10 minutes and asked to discuss among themselves regarding the need for special education.
  - The teacher calls out a number for a group and another number between one to six, for the group member.
  - The student is asked to share the group’s answer with the class.
  - The teacher shows PPT slides no.8 to 11 and discusses the answer with the class in detail.
  - All the students are given 5 minutes to discuss the following questions:
    o How they worked as a group?
    o What activities helped them to achieve their group goal?
    o What things should they avoid doing in the future activities?
  - The teacher concludes the session by showing the PPT slide no. 12.
Special Education: Concept

- Special education is the individually planned and systematically monitored arrangement of teaching procedures, adapted equipment and materials, accessible settings, and other interventions designed to help learners with special needs achieve the greatest possible personal self-sufficiency and success in school and community.
- Identify the important terms in the definition.
- Think alone, discuss with your partner
- Share it with the class

Special Education: Concept

- Students with special needs, such as learning differences, mental health issues, specific disabilities (physical or developmental), and giftedness are those whose needs are addressed within the classroom setting.
- Generally, the term "special education" refers specifically to students with learning disabilities, mental conditions, and other disabling conditions.
- Beginning in 1952, Civitans were the first to provide widespread training for teachers of developmentally disabled children.

Classification of children with special needs

- Physically Challenged
  1. Sensory Challenged (deaf, blind, etc.)
  2. Motor Challenged
  3. Multiple Challenged
- Mentally Challenged
  1. Gifted
  2. Creative
  3. Mentally Retarded
- Educationally Challenged
  1. Educationally Bright
  2. Educationally Backward
  3. Learning Disabled
- Socially Challenged
  1. Deprived
  2. Maladjusted
  3. Juvenile Delinquent
  4. Deviant
  5. Emotionally Disturbed

Numbered Heads Together:

Discuss in your respective groups regarding the need for special education
Need for Special Education:
The Sarva Shiksha Abhiyan is to provide useful and relevant elementary education for all children in the 6 to 14 age group by 2010.
It aims to bridge social, regional & gender gaps, with the active participation of the community in the management of schools.
Thus the SSA indirectly strives to give equal opportunities to all children, including students with special needs.

Need for Special Education:
It is difficult for exceptional children to benefit from normal classrooms in regular schools. They need special learning methods, special syllabi and special teachers.
Mentally & physically challenged children also require special education as they have difficulty in adjusting in the society.

Need for Special Education (S.E):
S.E helps to make the exceptional children independent & self confident becoming useful citizens.
S.E helps parents, teachers & education planners in understanding the problems of the exceptional children & help them adjust to the society.

Need for Special Education (S.E):
The educational, social & physical needs of exceptional children are also different from normal children.
S.E. is found necessary because exceptional children should develop acc. to their abilities & potentialities.

Conclusion
We can make exceptional children adaptive, productive & independent through special education.
Unit: 4.4 Concept of integrated & inclusive education
And
4.6 Developing attitudes and competencies for inclusion.
(Session 23)
(Time 45+45 minutes)

Lesson Summary:
The focus of the lesson is the concept of Inclusive Education, the differences between the Normal, Special, Integrated and Inclusive Models of Education, the challenges faced in implementing Inclusive Education and solution to overcome the challenges. For the ‘Lead in’ stage the Cooperative Learning technique used is ‘Three Minute Review’. ‘Think-Pair-Share’ is used during the ‘Detailed Study’ and ‘Numbered Heads Together’ is conducted for the ‘Extended Activity’.

Objectives:
- General Objectives:
  o The student explains the different types of models of education, the challenges faced in implementing Inclusive Education and the ways to overcome these challenges.
- Specific Objectives:
  o The student tells the meaning of inclusive education.
  o The student explains the differences between the different models of education namely: the normal, special, integrated and inclusive education models.
  o The student tells the challenges faced in implementing inclusive education after discussing with his/ her partner
  o The student discusses with his/ her group members and explains the ways to overcome the challenges to implement inclusive education.
  o The student cooperates with his/her peers while working in pairs and groups in answering the teacher’s questions.

Required material:
- Laptop and LCD projector to project the PPT slides during the lesson.

Step by Step Procedure:
- Lead in:
  - The teacher asks the students (Three Minute Review):
    - “What is special education?”
    - “What is the need for special education?”
    - The teacher links the answer to introduce the topic.

- Detailed Study:
  - The teacher shows PPT slides no. 2 to 4 to explain the concept and need for inclusive education.
- The teacher divides the class into pairs and asks the students. (Think-Pair-Share):
  - “What will be the challenges in implementing inclusive education?”
- The teacher gives one minute for the students to think individually for each question.
- The teacher then gives five minutes for the students to discuss their answers. The teacher randomly asks pairs to share their answers with the class.
- The teacher shows PPT slides no. 6 and 7 with the answers and discusses.
- The teacher shows PPT slides no. 8, 9 and 10 to explain the different types of education model.
- The teacher uses this technique for following questions on the respective PPT slides.
- The teacher shows PPT slide no. 11 to 25 and asks:
  - “What do you mean by wide and flexible responses by teachers?”
- The teacher shows PPT slide no. 14 and asks:
  - “Which countries will have a more positive attitude towards inclusion and why?”
- The teacher shows PPT slide no. 18 and asks:
  - “Which training model for inclusion will be most effective and why?”
- The teacher shows PPT slide no. 19 and asks:
  - “Give example of assistive devices for inclusion.”
- The teacher shows PPT slide no. 22 and asks:
  - “What do you understand by the term ‘psycho social’ implications of disabilities?”

○ **Extended Activity:**
- The teacher divides the class into groups of six members each. (Numbered Heads Together)
- The groupings are done according to the last letter in the surnames of the students.
- Six roles are distributed amongst the members in each group i.e. leader, recorder, time keeper, encourager, organiser and noise checker.
- The teacher asks each group to write down at least four points on how to overcome the challenges in implementing inclusive education.
- The groups are given fifteen minutes for the activity.
- The teacher supervises the activity.
- The teacher calls out at random a group number and then a number for the member of the group who is asked to share the answer with the whole class.
- The teacher gives chance to all the groups to share their answers and allows the students to write down the points in their note books.
- The teacher then shows the PPT slides no. 27 and 28 with the answer and discusses it with the class.
- All the students are given 5 minutes to discuss the following questions:
  o How they worked as a group?
  o What activities helped them to achieve their group goal?
  o What things should they avoid doing in the future activities?
- The teacher shows PPT Slide no. 29 and concludes the session.
4.4 Concept of integrated & inclusive education
4.6 Developing attitudes and competencies for inclusion.

Paper II Section I
Psychology of Development and Learning

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What is Inclusive Education?
• Inclusive education refers to educating each & every child without any sort of discrimination because of physical, mental or emotional abilities.
• It involves bringing all the resources required for teaching, to the physically and mentally challenged child (special needs child) rather than separate him into a special environment.
• The special needs children are taught in the same classroom with other children.’

‘The underlying assumption of inclusive education is that it is an attitude or belief system, not an action or set of actions. It is a way of life, a way of living together, based upon the belief that each individual is valued and does belong.’ (Thousand & Villa, 1995).

Think-Pair-Share:
What are the major challenges in implementing Inclusive Education?

Major Challenges:
• Inadequate administrative provisions to assure proactive leadership.
• Limited accessibility and provision for physical resources.
• Inadequate school and classroom practices to support diverse learners.
• Inadequate training and re-training of teachers.
• Inadequate funding for basic education and for support services.
Major Challenges:

- Inadequate administrative provisions to assure proactive leadership.
- Limited accessibility and provision for physical resources.
- Inadequate school and classroom practices to support diverse learners.
- Inadequate training and re-training of teachers.
- Inadequate funding for basic education and for support services.

Special & Normal Education Model:

- Integrated Education Model:
  - Concept of Inclusion:
    - Every child has an inherent right to education on the basis of equality of opportunity.
    - No child is excluded, or discriminated on grounds of race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, disability, birth, poverty or other status.
    - All children can learn & benefit from education.

- Inclusive Education Model:
  - Concept of Inclusion:
    - Children’s view are listened seriously.
    - Individual differences between children are a source of richness and diversity, and not a problem.
    - The diversity of needs and pace of development of children are addressed through a wide & flexible range of responses.
**Difference between Inclusive & Integrated Education system:**

- Inclusion is a wider concept as it does not only refer to children with disabilities, but includes all children who face some kind of barrier in learning.
- Integration implies that there has been first segregation, while inclusion starts with the students and their needs.
- Inclusion more positive than integration.

**Attitude of Pre-Service Teacher’s towards Inclusive Education: Sharma et al.**

**Less Positive**

- Positive

**More Positive**

- Less

**Attitudes of Teachers in Pune:**

- A research survey was conducted (2006).
- Sample 22 secondary school teachers from a government aided school.
- 20 secondary school teachers from a non-government aided school.
- Both the schools followed inclusive education.
- The findings of the study is graphically represented as follows.

**A study was done jointly by the University of Pune and Monash University, Australia:**

Findings:

- Over 97% of pre-service teachers qualifying for a diploma or B.ED, had no contact with children with disabilities.
- 96% were not trained to focus on their education.
- 88% of pre-service teachers had no previous experience of teaching a student with disability.

**Creating a Positive attitude:**

- Access to substantial, high quality training opportunities. (Kemple, Hartle, Correa, & Fox, 1994, Campbell, 1995).
  - Enriched models
  - Unified program of study
  - Embedded or Infused model

- Opportunities for ‘hands-on’ experiences with students with special educational needs:
  - A study by Campbell et al. (2003) demonstrated the benefits of combining substantial, university-based instruction with structured fieldwork experiences in changing attitudes towards disability and inclusion.
Creating a Positive attitude:

- Adequate support and encouragement:
  - Support from other members of the staff.
  - This support determines their attitude and if they will remain in the school.
  - Adequate staffing and resources.
  - Positive leadership.
  - Availability of planning time.
- Provision for a good quality working environment.
- Freedom and opportunities for planning.

Capacity Building of Teachers for Inclusive Education

Teachers need to be trained in the development of the awareness of the:

- definitional aspects of the areas of disability
- various categories of disabilities
- approaches in identifying children with disabilities
- assistive devices

Capacity Building of Teachers for Inclusive Education

- Simulation Exercises about disabilities
- ‘Plus Curricular Activities’
- Teachers need to be trained in the development of right attitude towards disability
  - skill in the use of various methods of teaching
- mastery of application of enabling technologies to reduce handicap

Developing Teacher Competencies:

- Inclusive schools need general education teachers and specially trained teachers to deal with Inclusive Education.
- General education teachers must also possess instinctive or acquired competencies. Children are more living as human beings than grown ups.
- Teacher must also have the ability to informally assess the skills of the student needs.
- Ability to modify assignments, set alternative expectations, and alternative assessments that are suitable to individual students.
Developing Teacher Competencies:

• General teacher must realize that every child is their responsibility.
• Use variety of effective instructional strategies. Provide best learning approach.
• Consider that each child may make him/her a better teacher.
• A problem is a challenge for you to do your best.
• Most effective way of combating discriminatory attitudes in society is to spread the message “Quality Education To All.”
• Overcoming all barriers to learning.

Group Activity: Numbered Heads

• Discuss in your groups and write down at least 4 points on how to overcome the challenges in implementing inclusive education.

We can make inclusion happen by removing -

• **Physical barriers** posed by stairs, doorways, toilets, and other architectural aspects imperative to accessing facilities in the school.

**Barriers of the teaching system**, by providing facilities for accessing information related to the curriculum, by the use of **modern technology** like computers using specialized software. By providing awareness, sensitivity and solutions for teachers.

We can make inclusion happen by removing -

**Barriers of the examination system** by providing means of **free and fair evaluation** of the student’s knowledge irrespective of his/her sensory/physical status.

**Barriers of attitude** developed due to lack of awareness.

• Teacher’s attitude is very important.

• ‘**Children who learn together, learn to live together**.’ - Forest and Pearpoint.

Thank You
Unit 4.5: Adjustment- causes of maladjustment

(Session 24)
(Time 45 minutes)

Lesson Summary:
The lesson focuses on the concept of adjustment, maladjustment, the personal and social causes of maladjustment. For the ‘Lead in’ and ‘Detailed study’ stage the Cooperative Learning technique used is ‘Think-Pair-Share’ and ‘Paired Heads Together’ is conducted for the ‘Extended Activity’.

Objectives:
- General Objectives:
  - The student explains the concept of adjustment, maladjustment, the causes of maladjustment both personal and social.
- Specific Objectives:
  - The student tells the meaning of adjustment.
  - The student explains the concept of maladjustment.
  - The student discusses with his/her partner and explains the personal and social causes of maladjustment.
  - The student cooperates with his/her peers while working in pairs in answering the teacher’s questions.

Required material:
- Laptop and LCD projector to project the PPT slides during the lesson.

Step by Step Procedure:
- **Lead in:**
  - The teacher divides the class into pairs and asks:
  - “What do you mean by adjustment”
  - The teacher gives one minute for the students to think individually. (Think-Pair-Share).
  - The teacher gives three minutes for the students to discuss with their partners and organize their answers.
  - The teacher calls out pairs at random to share their answers with the whole class.
  - The teacher shows PPT slides to explain the concept of adjustment and links the answers with the topic.

- **Detailed Study:**
  - The shows PPT slides regarding the concept of adjustment asks the pairs of students the following questions. (Think-Pair-Share):
  - “Give examples of biological and social needs?”
  - “If satisfaction of needs leads to adjustment, then what will happen if needs are not satisfied? Give examples.”
  - The teacher shows PPT slides with the causes of maladjustment and asks:
- “Why will long sickness cause maladjustment?”
- “How will physical appearance affect adjustment?”
- “Give examples of parental attitude that can cause maladjustment.”
- “Why can the adopted child become maladjusted?”
- “Give examples of events that cause emotional shocks”
- Each question is discussed in the class after the respective pairs share their answers.

**Extended Activity:**
- The teacher divides the students into pairs. In each pair a student is allotted as alphabet ‘A’ and the other is allotted alphabet ‘B’
- The teacher asks students “List down the social causes of maladjustment.”
- The teacher instructs each student to think about the answer for thirty seconds and then discuss it with their partners.
- The students are given two minutes to discuss and write down the points in their note books.
- The teacher chooses at random a few pairs and asks only the ‘A’s to read out the points written by them. (Paired Heads Together)
- The teacher shows the PPT slide and discusses the answers.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a pair?
  - What activities helped them to achieve their goal?
  - What things should they avoid doing in the future activities?
- The teacher and concludes the session.
4.5 Adjustment

Paper II Section I:
Psychology of Development & Learning

Think-Pair-Share
What do you mean by adjustment?

Concept of Adjustment:
• “Adjustment is the process by which a living organism maintains a balance between its needs & the circumstances that influences the satisfaction of the needs.” - Laurence F. Shaffer.
  
• Needs can be biological, social, personal or communal.
• Circumstances can be inside or outside the person.

Concept of Adjustment:
• Factors inside the person influencing the needs:
  – Physical, mental, capacities, attitudes, interests etc.
• Factors outside the person:
  – Geographical conditions, social conditions, political and cultural influences.
• Nature of influences upon the individual’s needs can be favourable or unfavourable.

Concept of Maladjustment:
• All behaviour stems from the process of satisfying one’s needs.
• Whether the person is well adjusted or maladjusted depends upon the extent to which his needs are satisfied.
• Dissatisfaction of needs thus results in maladjustments.
### Personal Causes:

1. **Long sickness or injury:**
   - Restless and irritable if bed ridden for a long time.
   - Negative self concept as totally dependent on others, affecting behaviour.

2. **Physical Appearance:**
   - Social acceptance is low causing inferiority complex. E.g. physically challenged.
   - However some people over come it.

3. **Poverty:**
   - People resort to stealing leading to negative self concept and unacceptable behaviour.

4. **Parental Attitude towards children:**
   - Over protective, rigid, having unrealistic expectations.

5. **Conflicts in homes:**
   - Constant & violent fights between parents causes mental injury to the children.

6. **Value placed on the gender of the child:**
   - Preference given to boy child resulting in neglect of the girl child.
   - Need for love & belongingness not satisfied.

7. **Adopted children:**
   - May feel cheated, experience identity crisis, confused about biological parents.

8. **Emotional shock:**
   - Sudden death of a family member, natural calamities.
   - May result into various phobias

### Social Causes:

1. **Social discrimination:**
   - Based on caste, creed, religion, gender even intelligence.

2. **Traditions & Customs:**
   - Child marriage, untouchability, child labour deprives the satisfaction of many needs leading to frustration & maladjustment.

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**Paired Heads Together**

List down the social causes of maladjustment.

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**Thank You!**
Unit 4.6: Child abuse and child exploitation

(Session 25).
(Time 45 minutes)

Lesson Summary:
The lesson highlights the concept of Child abuse and Child exploitation along with the role of the teachers to make the society aware about them. The Cooperative Learning techniques used are ‘Think-Pair-Share’ for the ‘Lead in’ stage, ‘Think-Pair- Ink-Share’ for the ‘Detailed Study’ and ‘Round Table’ for the ‘Extended Activity’.

Objectives:
• General Objective:
  o The student tells the concept of Child abuse and Child exploitation with the role of teachers in catering to such students and making the society aware about them.
• Specific Objectives:
  o The student tells the concept of Child abuse and Child exploitation.
  o The student classifies what is Child abuse and Child exploitation.
  o The student explains the role of teachers in dealing such children.
  o The student lists down the activities that can be conducted for making students and parents aware of the Child abuse and Child exploitation
  o The student answers the teachers questions by cooperating with his/her partner and performing their roles while working in pairs or in groups.

Required material:
• Laptop and LCD projector to project the PPT slides during the lesson.

Step by Step Procedure:
• Lead in:
  - The teacher divides the class into pairs, shows PPT slide no. 2 and introduces by asking the following questions:
  - “What do you understand by child abuse?”
  - “What can be the different types of child abuses?”
  - The teacher gives one minute for the students to think individually. (Think-Pair-Share).
  - The teacher gives two minutes for the students to discuss with their partners and organize their answers.
  - The teacher calls out pairs at random to share their answers with the whole class.
  - The teacher links the answers with the topic.
• Detailed Study:
  - The teacher shows PPT slides no. 3 to 6 and discusses the answers.
  - The teacher asks the pairs:
- “How can you identify an abused child?” (Think-Ink-Pair-Share)
- The teacher gives a minute for the students to think about the answer individually.
- The teacher gives five minutes for the students to discuss with their partners and write down the points in their note books.
- The teacher asks randomly a few pairs to share their answer with the class.
- The teacher shows PPT slide no. 8 and 9 with the answer and discusses them in detail.
- Teacher asks the pairs:
- “What is the difference between child abuse and child exploitation?”
- The teacher gives a minute for the students to think about the answer individually.
- The teacher gives two minutes for the students to discuss with their partners and write down the points in their note books.
- The teacher asks randomly a few pairs to share their answer with the class.
- The teacher shows PPT slide no. 11 and 12 with the answer and discusses about child labour in detail.

**Extended Activity:**
- The teacher joins three pairs of students to form a group of six students and asks them:
- “Write down the role of the teacher and school in making the society aware about child abuse and child exploitation.” (Round Table)
- The teacher gives twenty minutes for the students to rotate a book within a group for each member to write down a point related to the question.
- The teacher supervises the activity and clears doubts among the students.
- At the end of the activity the teacher asks each group to share their answer with the class. The students are given time to note down the points.
- The teacher shows the PPT slide no. 15 to 21 and discusses the answer with the class.
- The teacher gives time to the students to copy it in their note book.
- All the students are given 5 minutes to discuss the following questions:
  - How they worked as a group?
  - What activities helped them to achieve their group goal?
  - What things should they avoid doing in the future activities?
- The teacher concludes the session by showing the PPT slide no. 22 to 23 with the names of the NGOs working for children in Pune and Maharashtra.
4.6 Child abuse and child exploitation.

Paper II Section I:
Psychology of Learning & Development

Think- Pair - Share

- What do you understand by child abuse?
- What are the different types of child abuse?
  - Think about the questions for a minute
  - Turn to your partner and discuss the answer for two minutes.

Child Abuse:
- A legal concept involving demonstrable damage/ exposure to potential damage of children of minority age who are assumed to be in need of the protection & guardianship of adults.
- Any evidence of physical/ emotional damage to a child or a failure to attend to a child’s basic needs.

Child Abuse:
- State statutes which typically require that instances of suspected child abuse & neglect be reported to the appropriate authorities.
- School personnel can be legally charged with failure to report suspected child abuse/ neglect in a timely manner.
Think-Ink-Pair-Share

How can you identify an abused child?

Indicators of Child Abuse:

<table>
<thead>
<tr>
<th>Category</th>
<th>Child’s appearance</th>
<th>Child’s behaviour</th>
<th>Care taker’s behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Abuse</td>
<td>Bruises, burns, blood on clothes.</td>
<td>-weary of phy. contact. -apprehensive -aggressive withdrawn -poor peer relations</td>
<td>-harsh discipline -Unconcerned/ over protective -poor explanation of injuries -substance abuse.</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>-little tangible evidence</td>
<td>-very passive -very aggressive/demanding -inappropriate adult/infantile beh. -lags in development</td>
<td>-belittles/ blames child. -cold &amp; rejecting -seems unconcerned -substance abuser</td>
</tr>
</tbody>
</table>

Think-Ink-Pair-Share

What is the difference between child abuse and child exploitation?

Child Exploitation:

- Involving a child in illegal/ immoral activities for the benefit of a parent/ care taker.

- This could include child pornography, child prostitution, sexual abuse/ forcing the child to steal.

Child Exploitation:

- Forcing workload on a child in or outside the home so as to interfere with the health, education & well being of the child.
### Categories under child exploitation/child labour: below 14 yrs
- Paid or unpaid help in factories, workshops or household activities etc.
- Street children: shoe shine boys, beggars, news paper vendors.
- Bonded children: sold by parents as slaves.
- Children helping parents at work
- Children used for sexual exploitation

### Awareness programs by school/teachers: for students and parents:
- Child rights
- Violence and its impact on children
- Causes and impact of different types of child abuse and child exploitation
- Corporal punishments in school
- Types of child labour
- Neglect of children
- Laws against child exploitation

### Child rights:
- Right to free and compulsory elementary education for all children in the 6-14 year age group (Article 21 A).
- Right to be protected from any hazardous employment till the age of 14 years (Article 24).
- Right to be protected from being abused and forced by economic necessity to enter occupations unsuited to their age or strength (Article 39(e)).

### Role of a Teacher:
- Observer
- Listener: May speak directly or through a friend or through their writing, drawing or play.
- Report: Report to authorities for investigation.
- Counselling: Maltreated children are children with special needs.
- Awareness: Make children aware of their rights

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### Round Table Technique:

“Write down the role of the teacher and school in making the society aware about child abuse and child exploitation.”
How to deal with an abused child:
- Be calm: try to control your rage & listen to the child so that they don’t feel guilty.
- Find a quiet, private place to talk.
- Believe in the child: Victims rarely lie, especially about child abuse.
- Stress that it is not the child’s fault.
- Respect the child’s privacy.

How to deal with an abused child:
- Be supportive: ask non judgmental open ended questions.
- Be truthful: These children need to learn to trust adults again. Never make promises that you cannot keep.
- Make a report immediately to the proper authorities.

Classroom activities:
- Promote an accepting environment in your classroom.
- Be warm and loving.
- Create an individualized program for the maltreated child.
- Give the maltreated child additional attention wherever possible.
- Create classroom activities that focus on the issue of child abuse.

NGOs working for children in Pune:
- **The Akanksha Foundation**
  New Thermax Building
  Next to Sai Chambers
  Old Bombay Pune Highway Road
  Wakdewadi, Pune – 3 Tel: +91 20 25540007/08/09
- **Child line**
  S No 918, The Osaphical Society, Deccan, Pune, 411004
  **Phone Number:** +91-20-25675897
  www.childlineindia.org.in

NGOs working for children in Maharashtra:
- **Action for the Rights for the Child (ARC)**
- **Forum Against Child Sexual Exploitation (FACSE)**
7. Evaluation:

*Researcher Made Achievement Test (Post Test)*

*Paper II Section I: Psychology of Development and Learning.*

Total marks :_/50.

Name:__________________________________________________________________

College:___________________________________________________Date:__________

Instructions:

1. All questions are compulsory
2. Figures to the right hand of the questions indicate marks.

**Q1. Choose the correct alternative given below:** 10 marks

1. Who established the first Psychological Laboratory?
   a. Galton
   b. Wundt
   c. Kurt Lewin
   d. Watson

2. Educational Psychology helps teachers to understand:
   a. The learner
   b. Evaluation
   c. Group dynamics
   d. All of the above

3. Social values, customs, traditions and institutions constitute:
   a. The physical environment
   b. The mental environment
   c. The social environment
   d. The cultural environment

4. Which is not a characteristic of later childhood stage:
   a. Understanding abstract concepts
   b. Parental approval is important
   c. Likes group activities and games
   d. Team spirit and self reliance is not developed

5. The correct sequence of the motivational cycle is:
   a. Need- tension- activity– goal- relief- need
   b. Tension- need- activity- goal- relief- tension
   c. Activity- tension- goal- relief – need- activity
   d. Need- activity- tension- relief –goal- need
6. Personality according to Allport, is the organization of:
   a. Psychological systems
   b. Social systems
   c. Psychophysical systems
   d. Physical systems

7. The education system that remains the same, but modifies the child to fit the system is:
   a. Normal education system
   b. Special education system
   c. Integrated education system
   d. Inclusive education system

8. Mentally retarded can be classified as:
   a. Idiots
   b. Imbeciles
   c. Morons
   d. All of the above

9. Psychology first lost its soul, then mind, then its:
   a. Consciousness
   b. Unconsciousness
   c. Preconsciousness
   d. Both (a) and (b)

10. E learning environment develops
    a. Listening skills
    b. Writing skills
    c. Reading and writing skills
    d. Reading and listening skills

Q2. State whether True or False: 5 Marks

1. Physical development is the growth of the brain ___.
2. There should be a uniform curriculum for all children. ___.
3. Gifted children required more extracurricular activities.___.
4. Personality inventories are useful in self-testing. ___
5. Modern education is based on individual differences. ___

Q3. Answer in short: 10 Marks

1. What is the difference between Inclusive and Integrated education system?
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
   ____________________________________________________________________
2. How will you distinguish between a learning disabled child and a mentally retarded one?
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

Q4. Read the given passages and answer the questions given below each passages. 10 marks

(i) Nimesh is 14. He is an albino and is totally blind. This means that he has no pigments in his skin. His hair is white and his eyes are very pink. He must not go out in the sun without complete sun block. He is of average intelligence and is very sociable. Nimesh has learned braille from a period at a residential school which has encouraged him to be independent. His parents have decided to try to have him educated at the local secondary school. He will be seen by a visiting teacher for the blind at regular intervals and any textbooks he needs can be supplied in braille.

Nimesh wants to take part in everything and he has little or no fear. If he is in a new situation he uses his hands to explore it (or him/her). he is becoming quite strong and determined and does not like to be told what to do. Because he cannot see things he wants to satisfy his curiosity by asking questions constantly. Why? is his favourite word. Sometimes Nimesh can be seen rocking backwards and forwards. he does this when he has become confused and doesn’t know what is happening.

a. What type of a special need child is Nimesh? (1 mark)
____________________________________________________________________

b. Which type of education system did Nimesh’s residential school follow? (1 mark)
____________________________________________________________________

c. Name the education system Nimesh’s parents want him to study in. (1 mark)
____________________________________________________________________

d. Describe Nimesh’s personality in your own words. (any 5 points) (5 marks)
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________
____________________________________________________________________

(continued on next page)

e. Name two teaching aids will you use while teaching students like Nimesh in your classroom. (2 marks)
____________________________________________________________________
____________________________________________________________________
(ii) Jatin a talented musician, has two daughters Meena and Tina. Meena is taller than Tina. Both are well mannered, and musically inclined. Meena appears socially reserved and quiet, while the Tina, who was born into the same family environment, seems more outgoing. In addition, Meena has been diagnosed with a learning disability while Tina seems exceptionally well-functioning cognitively. The girl with learning disability has problem in perceiving letters of the alphabet. She makes mistakes while reading and makes many mistakes in her written work.

a Which of the differences could be due to heredity and which are caused due to environment? (3 marks)

b. Name the learning disability faced by one of Jatin’s daughters. Name two characteristics of the learning disability. (2 marks)

Q5. Explain in detail: 10 marks

Describe the mental development among later childhood students. Mention specific activities you will conduct to bring about their mental development.
References:


Cooperative learning seating options. [Image] (nd). Retrieved April 17, 2016 from https://s-media-cache-ak0.pinimg.com/236x/25/f8/76/25f876761332b8ac9858c08b3fc3d93.jpg


APPENDIX G

Feedback Sheet for the Neutral Observers

Objectives of the Feedback Sheet:

1. To study if appropriate cooperative learning techniques were selected according to the concepts of the unit.

2. To study if the cooperative learning techniques selected helped achieve the objectives of the lecture.

3. To study the implementation of the cooperative learning techniques used.

4. To study if the cooperative learning techniques used had the elements of cooperative learning (i. positive interdependence, ii. face to face interaction, iii. individual and group accountability, iv. interpersonal and small group skills and v. group processing) in terms of the student teachers’ behavior.

5. To study if the grouping strategy used were appropriate to the objectives of cooperative learning.

6. To study the opinion of the expert regarding the use of cooperative learning techniques for B.Ed. students.
Feedback Sheet for the Neutral Observers

Instructions: Read the following statements and give the rating using the following key. Please put a tick mark (✓) on the rating scale using the following key:-

1 indicates Strongly Disagree (SD); 2: Disagree (D); 3: Agree (A) and 4: Strongly Agree (SA).

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Items</th>
<th>1 (SD)</th>
<th>2 (D)</th>
<th>3 (A)</th>
<th>4 (SA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Teaching</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Teacher was well prepared for the session.</td>
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<tr>
<td>2.</td>
<td>The cooperative learning technique was selected appropriately according to the objectives of the unit.</td>
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<td>3.</td>
<td>The techniques were appropriate for learning the concepts.</td>
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<td>4.</td>
<td>Goals of each group were clearly stated.</td>
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<tr>
<td>5.</td>
<td>Teacher supervised and monitored the groups during the activities.</td>
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<td>6.</td>
<td>The program was properly developed and implemented by the staff member.</td>
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<tr>
<td>7.</td>
<td>The Cooperative Learning techniques used gave scope to the teacher for evaluating the students.</td>
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<tr>
<td>8.</td>
<td>Changing group members helped maintain heterogeneity</td>
<td></td>
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<td></td>
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<tr>
<td>9.</td>
<td>Teacher gave additional inputs wherever necessary.</td>
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<tr>
<td><strong>Learning</strong></td>
<td></td>
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<tr>
<td>10.</td>
<td>Students followed the instructions about the pair/group activity given by the teacher.</td>
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<tr>
<td>11.</td>
<td>Group size was appropriate according to the student’s strength in the class.</td>
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<tr>
<td>12.</td>
<td>The students fulfilled his/her responsibility to complete their share of work.</td>
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<tr>
<td>13.</td>
<td>Students were able to plan and work to achieve their goal.</td>
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<tr>
<td>14.</td>
<td>There was face to face interaction among students.</td>
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<tr>
<td>15.</td>
<td>The techniques helped in decision making among students.</td>
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<tr>
<td>16.</td>
<td>Students were active during group work</td>
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<tr>
<td>17.</td>
<td>The classroom environment was free and conducive.</td>
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</tbody>
</table>
18. Students were given an opportunity to work together.
19. Students worked with peers, other than their close friends.
20. Students showed acceptance to listen to each other’s views.
21. Cooperative learning techniques helped the students to come up with diverse answers from different perspectives.
22. The program gave scope for developing communication skills among students.
23. Students participated without any tension.
24. The activities helped develop conflict resolving skills among students.

Q.25. What are the advantages of using cooperative learning teaching techniques for pre service teachers?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Q. 26. What are the possible limitations of using cooperative learning teaching techniques for pre service teachers?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Name and Signature of the Observer
APPENDIX H
Feedback about Cooperative Learning by the Pre Service Teachers of the Experimental Group

Name: ___________________________ Date: ___________________

Dear Student,

Q How did the cooperative learning techniques used in the class have an effect on your educational experience?

Please give your responses for each of these items by putting a tick mark (✔) on the rating scale given below.

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<tr>
<th>1</th>
<th>2</th>
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<tbody>
<tr>
<td>Strongly Disagree (SD)</td>
<td>Disagree (D)</td>
<td>Agree (A)</td>
<td>Strongly Agree (SA)</td>
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<tr>
<th>Sr. No</th>
<th>Items</th>
<th>1 (SD)</th>
<th>2 (D)</th>
<th>3 (A)</th>
<th>4 (SA)</th>
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<tbody>
<tr>
<td><strong>Personal</strong></td>
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<tr>
<td>1.</td>
<td>I learnt to encourage others in their learning</td>
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<tr>
<td>2.</td>
<td>Helped me learn how to communicate accurately and clearly</td>
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<td>3.</td>
<td>I learnt how to deal with conflicts constructively.</td>
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<td>4.</td>
<td>Improved my tolerance and respect for other’s opinions</td>
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<td>5.</td>
<td>The environment was free so I learnt to share my opinions without fear of rejection.</td>
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<td>6.</td>
<td>Improved my self esteem when my group achieved the goals.</td>
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<tr>
<td><strong>As a Learner</strong></td>
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<td>7.</td>
<td>Was more interesting than merely listening to lectures as I could actively participate in the class.</td>
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<td>8.</td>
<td>Got an opportunity to work with a classmate with whom I was not very well acquainted.</td>
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<td>9.</td>
<td>Learnt to be accountable to my group by fulfilling my roles and sharing my knowledge.</td>
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<td>10.</td>
<td>Got sufficient opportunity to share my opinion while working with my classmates.</td>
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<td>11.</td>
<td>Helped my learning through discussions and sharing of ideas.</td>
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<td>12.</td>
<td>Learnt better when a classmate explained something.</td>
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<tr>
<td>13.</td>
<td>Understood that each member requires to fulfill their respective roles to attain the group goal.</td>
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</tbody>
</table>
As a Teacher
14. Helped understanding the concept of cooperative learning.
15. Learnt the cooperative learning techniques which can be used in everyday teaching.
16. Learnt how to form groups and assign roles to students while using cooperative learning techniques.
17. Learnt how to actually conduct lessons using cooperative learning techniques.
18. Learnt to plan interesting and engaging activities for students while conducting school lessons.
19. Understood the role of a teacher as a facilitator in cooperative learning.

Q.20. Select the techniques of cooperative learning you enjoyed doing and state why you enjoyed them?

☐ Three minute review:________________________________________________

☐ Think Pair Share:____________________________________________________

☐ Three minute interview:______________________________________________

☐ Numbered Heads:____________________________________________________

☐ Round table technique:_______________________________________________

☐ Pair Compare:________________________________________________________

☐ Paired Heads together:_______________________________________________

☐ Circle the sage:_____________________________________________________

☐ Formulate, listen, share and create:___________________________________

☐ Timed, Pair, Share:__________________________________________________

Q.21. Did you like working and studying with others or would you prefer to study alone? Why?
___________________________________________________________________
_______________________________________________________________
___________________________________________________________________

Q.22. Did you learn the concepts better when your classmates explained it? Why?
___________________________________________________________________
Q.23. Which Personal qualities and skills were developed while working with others?
☐ Team Spirit
☐ Communication Skills
☐ Confidence
☐ Analytical thinking
☐ Appreciation for others

Q.24. Will you use cooperative learning techniques as a teacher?
☐ Always
☐ Frequently
☐ Occasionally
☐ Rarely
☐ Never

Q.25. Rank the barriers you might face while using cooperative teaching techniques?
☐ Time restriction
☐ Reluctance/ unwillingness to participate by a few students
☐ Overcrowded classrooms
☐ Indiscipline during the sessions/loss of class control
☐ Imbalanced grouping
☐ Any other:________________________________________________________

Student’s Signature

Thank you for your valuable feedback and cooperation
APPENDIX I

Scanned photocopies of answers written by the Pre service teachers from the Experimental group during the Second Internal College Exams.

Ms. Aditi Anil Ketkar.

Ms. Sujata Anchilya

Ms. Mugdha Aralkar

1. Gifted children
   - Gifted children are those who have very high IQ (Intelligent Quotient) above 140 or between 125-140.
   - Abilities in certain fields of gifted children are tested with challenging questions.
   - Gifted children often experience difficulties in problem solving and group discussions because they have thoroughly understood some concepts.

   Teacher should be careful with the questions given to gifted children.

2. "Gifted Children"
   - They are having:
     - Phenomenal memory
     - Divergent thinking
     - No set line thinking
   - Creativity:
     - Original methodology
     - Original research
     - Original form...

   "For these kinds of children activities:

   0. Give them project work, individual/group work or those exercises which are different in nature.
   1. Give them problems to solve on their own.
   2. Give them problems to solve in logical sequence.
   3. They have to solve real-life problems.

   Activities:
   - Language: The classification of gifted children will be unusual in future.
   - Assignments: Essay for creative writing.

3. Illustration
   - Gifted children in the process of learning need to be provided opportunities to explore their interests and abilities.
   - They should not be restricted to the same set of activities.
   - The teacher can provide them with various opportunities to develop their creativity.

4. Adorable personality:
   - Adorable difference
   - Teacher should always have adorable personality.
   - Most students generally indicate that particular subject teachers should be a role model.

5. Use of teaching aids
   - Teachers should make use of teaching aids.
   - The charts, models, etc., which encourage students can be dropped.

6. Innovative ways of teaching
   - For reluctant students, they may have group activities, circle the size, discussions to take participation from all students.

7. Use of technology
   - Teachers can use technology like:
     - Stereo, computer graphics, video, computer hidden video camera.
   - Easy, simple, efficient, and economical.

8. Use of different methods of teaching:
   - Teacher can use any method which is easy and efficient.
   - Students should be entertained, interested, and motivated to learn.
   - Teacher can provide different activities to students at different levels according to their understanding level of students.

9. Arranging field visits:
   - For field trips, teachers should arrange field trips with the help of the student to understand the process.
Ms. Swati J. Bhide

1. Check the age:
   - Ask the gifted child to do peer tutoring.
2. Encourage them to participate in different gift competitions.
3. Ask them to find out some other methods of solving math problems.

Ms. Nidhi Haldavenekar

1. Write down activities that can be organized to cater to the needs of the gifted child.
2. Give project work.

Ms. Sneha Hanchanalkar

1. Catering to the needs of the gifted children:
   - Gifted children who stand on different levels than the average or above average students should be handled cautiously. It is a task for the teachers of a normal school where only one student in a class are gifted is always to be remembered.
   - Sometimes we teach class regular gifted children as cripples, as they have answers of every question already, so they are all the time avoiding friendly with them.
   - They refuse to work sometimes as they complete their tasks very quickly than others.
   - So, we see some activities which will:
     - Appeal to sense:
     - Gift children who are given leadership to groups in the class and their groups are to be given certain topics in which they can do work. So, such topics may be weighted in academics. Made political issues controversial topics which interested by all.
     - Gifted children can tell tricks.
2. Team Discussion:
   - Gifted children always like to work in teams. So, give any topic and make groups.
3. Different models of teaching:
   - Motor model,
   - Motor cognitive model.
Ms. Uttara N.

b) Activities for gifted children:

- There are various activities that can be taken up to deal with gifted children such as:
  1. Project-based activity: In this activity, students need to collect, analyze, sort, and present the information.
  2. Peer tutoring: These should be an activity in which one topic will be taught by that gifted child by peer tutoring it self study pattern.
  3. Record Management: These students should be given a responsibility of record management e.g., birthday records, timetable, exam and annual time table, school assistants records e.g., Captain, due, duties, etc.
  4. Participation in different competitions: by elocution, debate, projects, etc.

Ms. Sapna A. Kardile

2) Gifted children:

- Gifted children have an abundant store of ideas and skills to solve any problem after solving any activities for any idea.
- Questionnaire: Prepare a question which is beyond the topic and gives the ability to think about analytical thinking enhance.
- Problem solving: Make problems in different ways: mathematical thinking enhance.
- Group testing: Make a group, give one more child as a leader, so he or she has to give group projects & test properly, he/girls know to either find the right solution and the problem given by teacher to solve.
- Test him to search more information about the topic given by teacher which is not related to book but by book information.
- Make a puzzle, game, cross words etc., such students tell puzzles in class.

Ms. Nivedita Phaltankar

Gifted children:

- Gifted children are children who have about average in one good area like math, language, logical reasoning. But not even a gifted child who is not good in all subject but still loved interest & marked in other gifted activity. Thus one can make activities that can be arranged for gifted children to keep them engaged so that they don't disrupt the class.
- Cut the edge: They can be made a generation vision of a group member. Teacher will give one group so there is one gifted child along with the other members. Teacher will give the topic. Then the child will be the main partner of the group, who will give the maximum input.
- Peer tutoring: Gifted children can be asked to teach the peers. This will help both ways. Teacher will have less burden of the work below average students will get following form a friend.
- Gifted students, according to their interest can be made leader to promote their leadership quality for making activity in the class.
APPENDIX J

Researcher’s Reflections

Session 1:

Unit: 1.1 Meaning, Nature of Educational Psychology.

(Time 45 minutes)

The pre-service teachers found the ‘lead in’ activity very amusing as it consisted of a funny classroom cartoon image. During the ‘Think Pair Share’ technique they were not sharing their ideas with their partners. Though time was given to discuss with their partner they were answering not as a pair. They were giving the answers as an individual. They had to interrupt them while answering and asked them to answer as a pair.

The ‘Numbered Heads’ session took time as the pre-service teachers were not used to being numbered off. After the groups answered, their efforts were appreciated and the class was asked to give each group a round of applause. This made all the members of the respective group get the feeling of accomplishment. Since the session took time the group processing discussion had to be done in a hurry.

Session 2:

Unit: 1.2 Methods of Studying Human Behaviour (Lecture 1)

(Time 45+45 minutes)

The ‘Numbered Heads’ technique was used in the ‘detail study’ of ‘Introspection as a method of studying human behaviour’. When the pre-service teachers were asked to introspect about the situations given it was observed that there were some conflicts in a couple of groups. This also resulted in a few members from those groups to hesitate from participating in the group. The group members were asked to include the members in the
discussions. One of the groups could not come to a consensus on their answers when asked to share their answer in the class. They were reminded that this was a group activity and the group had to come to a common answer by resolving conflicts and cooperating with one another. The group was not appreciated by the class for its effort.

The pre service teachers enjoyed the ‘Hocus Focus’ pair activity and tried to outdo other pairs. This led to a lot of enthusiasm in the class. At the end of the session the pre service teachers came up and said they did not realise how time flew as they were active throughout and enjoyed the session.

**Session 3:**

**Unit 1.2 Methods of Studying Human Behaviour (Lecture 2)**

(Time 45+45 minutes)

The ‘Round Table’ technique was very successful as it allowed all the members of the group to participate. Those pre service teachers were selected who do not answer to share the responses of the group with the class. It was observed that as they started answering they were a bit hesitant, but with encouragement by the time they shared all the points in their answer they became confident. The time taken to form the groups took more time than what was planned.

**Session 4:**

**Unit: 1.3 Uses of Psychology to the Teacher.**

(Time 45 minutes)

A new technique was introduced where the groups had to prepare a concept map during the ‘Formulate, Listen, Share and Create’ technique. The creativity of the pre service teachers were shown in the concept maps they drew. The pre service teachers were more
quick to call out their numbers during the ‘Numbered Heads’ technique. They even selected the roles in the group faster and in the previous sessions. There were still some conflicts in three of the groups while categorizing the items given in the worksheets. However there emerged a member in these groups who helped resolve the conflict. So the action taken in the previous session of not appreciating a group who did not come to a consensus paid off. The group members realized that their efforts will be only appreciated if they work as a team and not individually.

Session 5:

Unit 2: Growth and Development: Principles of Growth and Development.

(Time 45 minutes)

During the ‘Think Pair Share’ technique pre service teachers showed more interest in sharing their ideas with the partners. They also answered together as a pair. In the ‘Numbered Heads’ technique, a group acknowledged each member’s contribution to the answer. This was in turn appreciated by the researcher.

Session 6:

Unit 2.1 Nature & Importance of Heredity and Environment - Social Heredity

(Time 45+45+45 minutes)

This was a long session as an extra class was given after the break. The pre service teachers did the ‘Three minute review’ very well without having to ask many questions. The ‘Numbered Heads’ technique too went off very smoothly and as the pre service teachers got a long time to discuss they came up with very good rational behind their answers.
Session 7:

Unit: 2.2 Stages of growth & development: later childhood

(Time 45+45 minutes)

The pre service teachers liked doing the ‘Pairs Compare’ technique as it was a slight variation of the ‘Think Pair Share’. The ‘round table’ technique took some time, but the pre service teachers managed the activity well and came up with very good answers that were much more in detail than those given in books.

Session 8:

Unit: 2.2 Stages of growth & development: Adolescence

(Time 45+45 minutes)

The grouping strategy was enjoyed by the pre service teachers as they came to know their peers who shared the month of birth with them. There was a group who modified the ‘Round Table’ technique. To save time and have more discussion in the group they wrote their points in their note book within a minute. Then they discussed and came to a consensus about the answer. This was very effective which showed that the discussions regarding how groups performed after each session helped in improving their performance as group members in the future activities.

Session 9:

Unit: 2.3 Role of school in growth & development of the learner.

This session was taken by a pre service teacher Purvi Gada. She had taken guidance before the session. It was an interactive session. She also conducted the think pair share activity effectively in the classroom. There was a lot of enthusiasm and interaction.
Session 10:

**Unit: 3.1 Nature of individual differences**

(Time 45 minutes)

The variation of the pair activity of ‘Paired Heads Together’ was successful as the pre service teachers followed the instructions and answered accordingly. The pre service teachers have become very used to ‘Think Pair Share’. The moment the name of the technique is mentioned the pre service teachers follow the steps of the technique without additional detailed instructions. After a minute of thinking individually, they turn to their partners automatically without having to be instructed to do so.

Session 11:

**Unit: 3.2 Causes of Individual differences: Personal and Environmental**

(Time 45+45 minutes)

The pre service teachers have become very good at doing the ‘Think Pair Share’ technique. They also answer saying that ‘we feel…’ or ‘my partner and I think…’

Session 12:

**Unit 3.3. Individual differences w.r.t.: personality, self concept, achievement motivation, study habits, emotions.**

(Time 45+45 mins)

The pre service teachers came up with interesting concept maps regarding the content. They were very eager to share their maps with the whole class. Many of the groups explained it very well.
Session 13:

Unit: 3.4 Mental Health

(Time 45 mins)

By now the pre service teachers have become experts in ‘Think Pair Share’. Many of the groups actually followed the modified version of ‘Round table’ technique improvised by their peers in session 9.

Session 14:

Unit: 3.4 Stress Management

(Time 45 mins)

To save time the pre service teachers made the ‘Numbered Heads’ group during the break. This helped giving more time for discussion. The pre service teachers have become very confident and those who never answered in the class have started sharing their ideas in the group and with the whole class.

Session 15:

Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Hearing Impaired)

(Time 45+45 minutes)

The pre service teachers enjoyed the dumb charade activity of guessing the names of movies. Later they realised how important hearing is for communication. The pre service teacher’s roll numbers were used to group them for ‘Numbered Heads’ and this time instead of numbers alphabets were given as group member identification.
Session 16:

Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Mentally Retarded)

(Time 45+45 minutes)

The pre service teachers were surprised to see the slide of the tiger with Down’s syndrome and this motivated them to discuss with their partners why such animals are not commonly seen in the wild.

Session 17:

Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Gifted)

(Time 45+45 minutes)

This session was very enjoyable. After the class a few pre service teachers came and told that they found the ‘Circle the Sage’ technique interesting. They also enjoyed the puzzles. Although the class got over they were working with their partners trying to crack the last puzzle given by the researcher.

Session 18:

Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Slow Learners)

(Time 45 minutes)

The interesting thing in this session was that many groups followed the improvised version of the ‘Round Table’ technique. At the end of the session a few pre service teachers approached and wanted guidance for their lessons where they wanted to use cooperative
learning techniques. This indicated their readiness to use cooperative learning teaching techniques as future teachers.

**Session 19:**

*Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Visually Impaired)*

*(Time 45+45 minutes)*

The ‘Timed Pair Share’ activity actually made the pre service teachers realise the importance of vision. They came up with very good answers for the ‘Numbered Heads’ technique. The pre service teachers are now taking less time to assign roles and they are using soft voices in groups and loud voices when they are sharing their ideas with the class. This has made the class less noisy during group work.

**Session 20:**

*Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Learning Disabled)*

*(45+45 minutes)*

There were a couple of pre service teachers who actually became very emotional when they were asked to compare what dyslexic children see and what we see when we read a passage. The ‘Think Ink Pair Share’ technique became a very emotional one, with the pre service teachers realising the difficulty dyslexic children have with reading.
Session 21:

Unit: 4.1 & 4.3 Identifying & Catering to Children with Special Needs. (Physically Challenged)

(45+45 minutes)

The pre service teachers have become very used to the cooperative learning techniques. As soon as there was a mention about the names of the techniques and the pre service teachers follow the steps without requiring many instructions. This has saved the time during the sessions.

Session 22:

Unit: 4.2. Need of special education

(45 minutes)

The pre service teachers are working very well in their groups. The number of conflicts in the groups is very less. They are able to clearly discuss what they feel with their peers. The shy students are also responding very freely in the class and their responses are being appreciated by the others.

Session 23:

Unit: 4.4 Concept of integrated & inclusive education

And

4.6 Developing attitudes and competencies for inclusion.

(Time 45+45 minutes)
The grouping done for the ‘Numbered Heads’ activity based on the last letters of their surname was enjoyed by the pre service teachers. They have become very familiar with the strategy of forming groups of six members. The minute six members are selected automatically the seventh member stands away to form the next group. This has made the job of conducting the cooperative learning teaching techniques in the class very easy.

Session 24:

Unit 4.5: Adjustment- causes of maladjustment  

(Time 45 minutes)

After the PPT slide with the conclusion was shown the pre service teachers started automatically discussing with their partners regarding the work they had done as pairs. Thus group processing took place automatically. This gave an impression that the pre service teachers have become well versed with the phases of a classroom session using cooperative learning techniques.

Session 25:

Unit 4.6: Child abuse and child exploitation.  

(Time 45 minutes)

This was the last teaching session of the intervention programme. The pre service teachers have become very well acquainted with the various cooperative learning techniques. At the end of the session a feedback of the pre service teachers regarding the intervention programme was taken.

A teacher made achievement test was conducted after all the sessions were concluded. During the II Internal Examination a very interesting thing occurred. A number of students
mentioned the ‘Circle the Sage’ technique as one of the ways to cater to the gifted students. During the session on the ‘Gifted students’ there was no mention about ‘Circle the Sage’ technique as a way to cater to gifted students. It was just used as a way to deal with the topic. However the pre service teachers identified the technique as way to cater to the needs of the ‘Gifted students’. Many of the pre service teachers also mentioned cooperative learning teaching strategies like ‘peer tutoring’ etc. in their answers to questions related to making teaching effective. This showed that they have a favourable opinion about cooperative learning teaching strategy and have started thinking as future teachers regarding the implementation of cooperative learning teaching techniques in their classrooms.

All the sessions were enjoyable and informative using cooperative learning teaching strategy. As a teacher/researcher I learnt a lot from the pre service teachers regarding each topic and also polished up the skills to use cooperative learning teaching strategy in the classroom by actually implementing them over these sessions. This teaching strategy allowed the classroom discussions to be very realistic, practical and helped get information beyond the ones available in reference books.
APPENDIX K

Scores on the Raven’s Progressive Matrices obtained by the Experimental Group pre service teachers (Adarsha Comprehensive College of Education and Research).

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APPENDIX O

Total Post Test scores obtained by the Experimental Group pre service teachers (Adarasha Comprehensive College of Education and Research)

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Total Post Test scores obtained by the Control Group pre service teachers  
(Tilak College of Education)

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## APPENDIX P

Blue Print of the Post Test

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APPENDIX Q

List of Experts for validating the Product

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<td>Dr Manayath Sukumaran Padmini</td>
<td>Professor and Head of the Education Department of Shivaji University, Kolhapur.</td>
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<tr>
<td>Dr Megha Uplane</td>
<td>Associate Professor, Department of Education and Extension, Savitribai Phule Pune University, Pune.</td>
</tr>
<tr>
<td>Dr Smita Pathak</td>
<td>Associate Professor, Tilak College of Education, Savitribai Phule Pune University, Pune.</td>
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<tr>
<td>Dr Asawari Bhave Gudipudi</td>
<td>Principal, M.I.T’s Vishwashanti Gurukul Teacher Training Academy School of Education, Loni Kalbhor, Pune</td>
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<tr>
<td>Mr. Siddhartha Roy</td>
<td>Senior Corporate Microsoft Power Point Trainer.</td>
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Expert for Data Analysis

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<td>Dr. Vishal Ghule</td>
<td>Statistics Consultant</td>
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**APPENDIX R**

List of Neutral Observers:

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<td>1.</td>
<td>Dr. Rekha Bhalerao</td>
<td>Associate Professor, ACCER</td>
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<td>2.</td>
<td>Dr. Manasi Mehendale</td>
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<td>Ms. Gauri Varade</td>
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APPENDIX S
Comparison between B.Ed. Syllabus Revised 2008 and Revised Syllabus for B.Ed. Two Year Programme (Choice Based Credit System Annual Pattern – 2015)

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<th>Unit Number/ Course Codes and Names</th>
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<td>Unit 1 Understanding the Growth and Development of the Learner</td>
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APPENDIX T

Photographs during the Intervention Programme