

PAPER-IV (B)

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Exam Notes

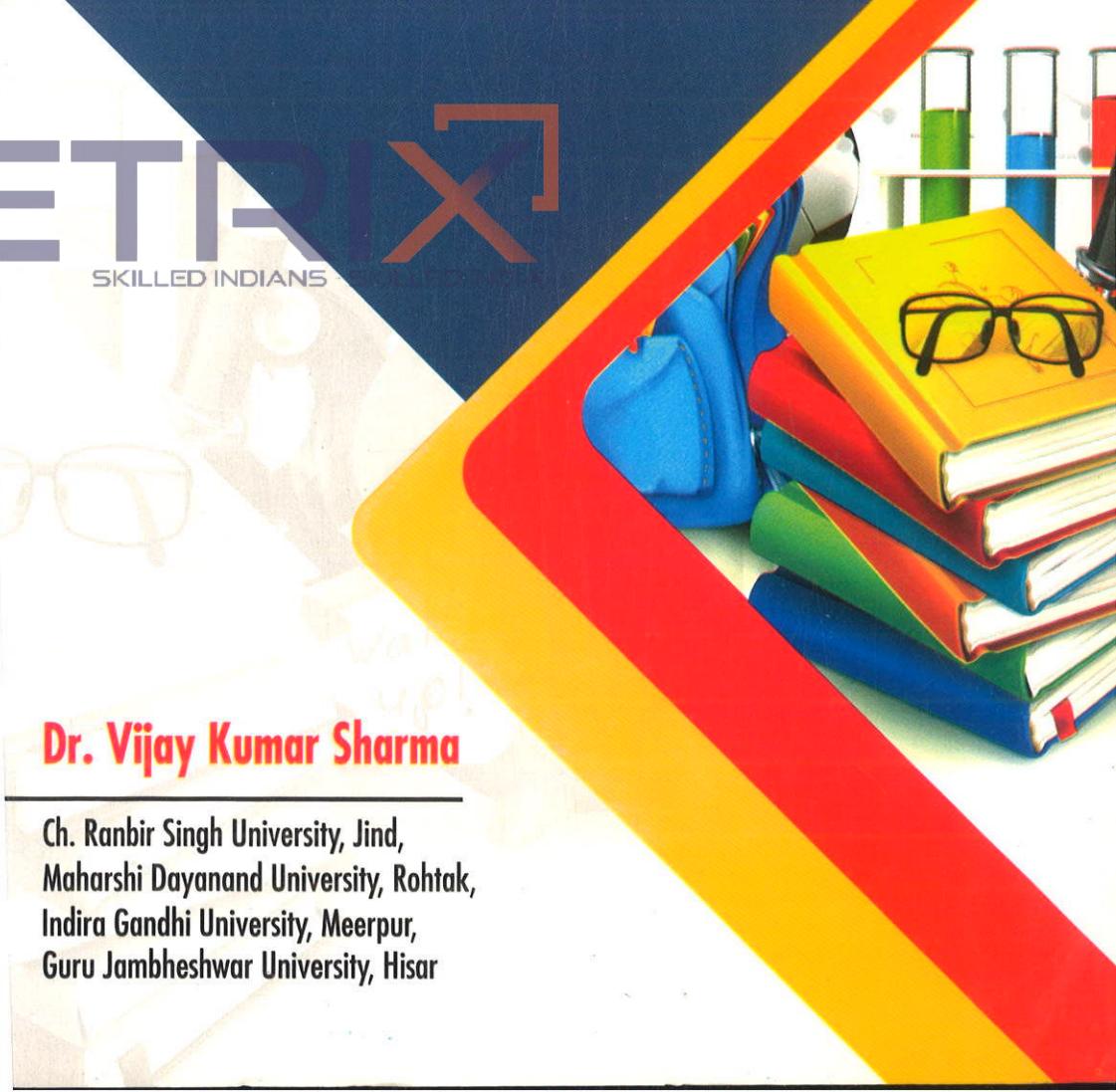
UNDERSTANDING DISCIPLINES AND SUBJECTS

B.Ed.-2nd Year



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SYLLABUS

UNDERSTANDING DISCIPLINES AND SUBJECTS

B.Ed.-II Year Paper-IV(B)

Time : 1.30 Hours

Max. Marks : 50

[Theory : 40, Internal : 10]

Note for Paper Setter :

- (i) Paper setters will set 5 questions in all, out of which students will be required to attempt 3 questions.
- (ii) Q. No. 1 will be compulsory and will carry 8 marks. There will be 2 short-answer type questions of 4 marks each to be selected from the entire syllabus.
- (iii) Two long answer type questions will be set from each of the two units, out of which the students will be required to attempt one question from each unit. Long Answer type questions will carry 16 marks each.
- (iv) All questions will carry equal marks.

Objectives :

After completion of the course, student teachers will be able to :

- describe the characteristics and nature of disciplinarity
- discuss paradigm shift in the nature of disciplines
- explain the nature of education as a discipline
- examine issues related to education as interdisciplinary knowledge
- discuss the emerging issue of school and Teacher education
- understand the multiple perspective of pedagogy

Course Content

Unit-I

1. The Doctrine of Disciplinarity
 - Meaning, characteristics and nature of Academic disciplines
 - Teacher's Subject matter knowledge and disciplinarity
 - Alternatives to Disciplinarity
2. Paradigm shifts in the nature of Disciplines
 - History and origin of Pedagogic Subjects; Philosophical, Sociological & Educational Perspective
 - Understanding subject, interdisciplinary, multidisciplinary and trans-disciplinary
 - Approach within different subjects.

Unit-II

3. Education as Interdisciplinary knowledge

- Critical analysis of education as a discipline/area of study.
- Education as a socially contrived system influenced by different factors.
- Interdisciplinary nature of education; relationships with disciplines/subjects such as philosophy, psychology, sociology, management, economics, anthropology etc. connecting knowledge across disciplinary boundaries to provide a broad framework for insightful construction of knowledge.

4. Theoretical Perspective of Education

- School education – contemporary challenges
- Linkage between education and other development sectors.
- Emerging dimensions of school and teacher education.
- Knowledge and pedagogy

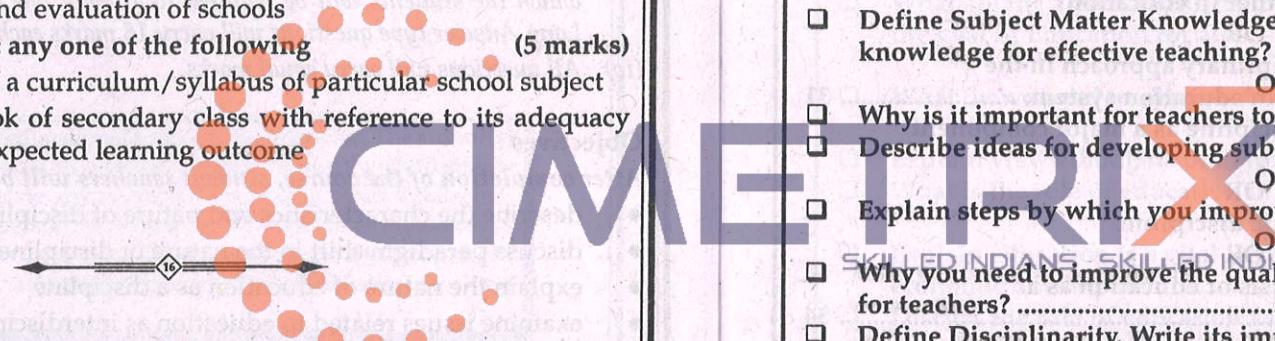
5. Support system of Education

- Re-conceptualism of learning resources – textbooks, workbooks, multimedia, etc.
- Monitoring and evaluation of schools

Task and assignments : any one of the following

(5 marks)

- Critical analysis of a curriculum/syllabus of particular school subject
- Evaluate a textbook of secondary class with reference to its adequacy and in achieving expected learning outcome



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Chapter-1

The Doctrine of Disciplinarity

MEANING, CHARACTERISTICS AND NATURE OF ACADEMIC DISCIPLINE

- What do you mean by Academic discipline? [June, 2018]

OR

- Define Academic Disciplines. Write its importance in education.

OR

- What is Academic Disciplines? What are the characteristics of this disciplines?

OR

- What is the meaning of Academic Disciplines? Discuss its nature and types.

Ans.

Meaning of Academic Disciplines

An academic discipline or academic field is a branch of knowledge. It incorporates expertise, people, projects, communities, challenges, studies, inquiry, and research areas that are strongly associated with a given academic discipline. For example the branches of science are commonly referred to as the scientific disciplines, e.g. physics, mathematics and computer science.

In other words an academic discipline or field of study is a branch of knowledge that is taught and researched as part of higher education. A scholar's discipline is commonly defined and recognized by the university faculties and learned societies to which he or she belongs and the academic journals in which he or she publishes research. However, no formal criteria exist for defining an academic discipline.

According to Educational innovations, "The term academic (scientific) discipline can be defined as the academic studies that focus on a self-imposed limited field of knowledge. It is the subject that one teaches and researches as part of higher education is the academic discipline of that person.

It can also be defined as form of specific and rigorous scientific training that will turn out practitioners who have been disciplined by their discipline (subject) for their own good.

Importance of Academic Discipline

The term academic discipline becomes a technical term for the organisation of learning and the systematic production of new knowledge. Disciplines are identi-

fied with taught subjects. But every subject taught at school or at university cannot be called a discipline. There are more to a discipline than the facts and concepts of a subject taught in academic setting.

There are many criteria and characteristics which indicate whether a subject is a distinct discipline. The essential characteristics of an academic discipline are given below :

1. Disciplines have a particular object of research (e.g.; politics, society, human behaviour).
2. Disciplines have a structure of accumulated specialist knowledge referring to their object of research.
3. Disciplines have theories and concepts that can organize the accumulated specialist knowledge effectively.
4. Disciplines use specific terminologies or specific languages adjusted to their research objects.

Discipline must have developed specific research methods according to their specific research requirements.

Discipline must have some institutional manifestation in the form of subjects taught at college or universities. It means a discipline and professional associations connected to it.

All these criteria may not be fulfilled by all disciplines. But an academic discipline must be perfect and should be able to accumulate more knowledge through the process of research. It must be dynamic.

Academic discipline is a recognized area to study. A "Common state of mind", including a sense of agreement on areas of inquiry and methods for studying problems, and a common belief that extending the discipline insights is a worthy endeavour. It is a belief that the continued development of the discipline depends on the generation of basic and applied research. In it a number of people, well known with in and outside the discipline, revered as contributors to knowledge, research, and practice.

So, we can say that education is a scenario which carries innovative changes in all its imperatives. The education is in a process of continuous changes. In teacher education, the modern trends favour for emerging of academic disciplines and allied school subjects. The necessity of teachers with proficiency in academic disciplines and professionalism in school subjects are accounted as essential quality of prospective and on going teachers.

Teacher education sector is seriously focusing on the necessity of emerging academic disciplines. Academic disciplines are in the making in the field. Some sort of new disciplines like 'Curriculum Development', 'technology of education', educational sociology and etc are emerged as new disciplines. Hence it is relevant to have a clear understanding on the academic discipline and its various factors by teachers and prospective teachers. So, academic discipline is vast accumulation of knowledge in a specific area. For e.g.; History is discipline. It can also consider Medieval Indian History a discipline. Physics is a discipline. Astro physics is a discipline. Robotics is a discipline.

Nature of Academic Discipline

In fact, there is a whole list of criteria and characteristics, which indicate whether a subject is indeed a distinct discipline. A general list of characteristics would include :

1. Disciplines have a particular object of research (e.g. law, society, politics), though the object of research may be shared with another discipline;
2. Disciplines have a body of accumulated specialist knowledge referring to their object of research, which is specific to them and not generally shared with another discipline;
3. Disciplines have theories and concepts that can organise the accumulated specialist knowledge effectively;
4. Disciplines use specific terminologies or a specific technical language adjusted to their research object;
5. Disciplines have developed specific research methods according to their specific research requirements; and may be most crucially;
6. Disciplines must have some institutional manifestation in the form of subjects taught at universities or colleges, respective academic departments and professional associations connected to it.

Only through institutionalisation are disciplines able to reproduce themselves from one generation to the next by means of specific educational preparation? A new discipline is therefore usually founded by the way of creating a professional chair devoted to it at an established university.

Following points explain the nature of discipline :

1. **All Disciplines Need not have all the Characteristics :** Not all disciplines have all of the aforementioned six characteristics. For example, English literature has the problem that it lacks both a unifying theoretical paradigm or method and a definable stable object of research, but it still passes as an academic discipline. Generally it can be said that the more of these boxes a discipline can tick, the more likely it becomes that a certain field of academic enquiry is a recognised discipline capable of reproducing itself and building upon a growing body of own scholarship.
2. **Disciplines are Studies :** If a discipline is called 'studies', then it usually indicates that it is of never origin (post second world war) and that it may fall short of one or more of the above mentioned characteristics. This would be typically lack of theorisation or lack of specific methodologies, which usually diminishes the status of a field of research. These 'studies' disciplines can either aim at remaining 'undisciplined', as women's studies did in the 1970's or they can engage in the process of their disciplinarisation and institutionalization.
3. **Not all Disciplines are Created Equal :** Although there can be no true hierarchy in the world of science, as each discipline can claim expert knowledge in its own domain, not all disciplines are created equal. Some disciplines would be considered to be 'more useful', more rigorous, more difficult, or more important than others'. There are also tremendous differences between the disciplines with respect to their overall standing within universities, which can be seen by the number of students and the amount of research money they can attract and the overall resources that are allocated to them by universities in terms of teaching personal, teaching hours, and equipment. Bigger departments with more staff and more expensive equipment tend to have greater influence within universities than smaller and less equipped department. In the U.K. this means that vice chancellors are usually recruited from the science and technology discipline on the grounds of greater managerial experience.

In addition, some newer disciplines like IT and management do quite well because of their great relevance to the business world and therefore greater attractiveness for students, while other more established disciplines like literature may have a hard time averting the fate of a slow death.

In this way an academic discipline can be said to exist when :

1. A faculty specifies a subject matter acceptable to other faculties as its area of inquiry.
2. There exists a distinct body of knowledge relating to this area of inquiry.
3. There is an academically acceptable means for expanding this body of knowledge. In the abstract, it may be that disciplines appeared with the development of the earliest specialized societal institutions intended to perpetuate and expand knowledge. Whatever the origin, their development has been accelerated and their importance has been augmented by the rapid expansion of human knowledge, both qualitative and quantitative and the development of higher education as a major societal institution.

Although some specialization existed prior to the eighteenth century, most branches of human knowledge were sufficiently limited in scope and in the need for specialized training so as to make them generally accessible to the relatively small percentage of the population that one might consider as being well educated.

In the later half of the eighteenth century, human knowledge began to expand at an increasingly rapid rate, this body of knowledge began to be broken up into distinct fields of inquiry, and specialists, both academic and non-academic, began to appear. The formative stages of the development of higher education as a major institutional force within society occurred at approximately the same time.

In conclusion, there are five strategies for conducting interdisciplinary inquiries :

1. Task differentiation,
2. Adhoc experimentation,
3. Disciplinary specification,
4. The building block approach, and
5. Multiple experimentation.

Of these strategies, adhoc experimentation was characterized as being the ideal in regard to implementing interdisciplinary strategies. Since adhoc experimentation is frequently, if not always, unattainable the building block approach was advanced as the most feasible of the remaining four strategies for the conduct of interdisciplinary inquiry.

TEACHER'S SUBJECT MATTER KNOWLEDGE AND DISCIPLINARITY

What is Subject Matter Knowledge? How important is subject matter knowledge for a teacher?

OR

Define Subject Matter Knowledge. How important is subject knowledge for effective teaching?

OR

Why is it important for teachers to have good subject knowledge?

Ans.

Meaning of Subject Matter Knowledge

Subject knowledge has a very important role to play because high-quality teaching rests on teachers understanding the subjects they are teaching, knowing the structure and sequencing of concepts, developing factual knowledge essential to each subject and guiding their pupils into the different ways of knowing that subjects provide : subjects create disciplined ways of knowing. So, a teacher should know and understand the material they are expected to teach in order to support pupils learning. A depth of understanding of the subjects to be taught as well as general pedagogical skills and understanding are keys to successful practice.

In fact, subject knowledge comes in different forms. According to Shulman's typology it has three types/kinds.

1. Content knowledge is what most people would perhaps think of simply as 'knowledge'; the kind of knowledge that comes from text books and reference books.
2. Curricular knowledge refers to what you know about the formally defined curriculum for your age range.
3. Pedagogic subject knowledge is the knowledge that practitioners have which helps them to teach and provide support as children develop their own personal subject knowledge.

In this way, the demands on teachers subject knowledge can be particularly great across the primary curriculum, not least in requiring them to understand how pupils need to know at particular points. The challenge is for professionals to know subjects well and also to understand how pupils learn in different subjects.

Importance of Subject Knowledge

Subject knowledge is a significant factor throughout the learning process. Whether planning work, checking learning, diagnosing pupil weaknesses, designing tasks and resources, presenting information, asking questions or giving formative and summative feedback, good subject knowledge is crucial. A teacher should know and understand the material they are expected to teach in order to support pupil's learning.

A depth of understanding of the subjects to be taught as well as general pedagogical skills and understanding are keys to successful practice.

Subject knowledge has a very important role to play because high-quality teaching rests on teachers understanding the subjects they are teaching, knowing structure and sequencing of concepts, developing factual knowledge essential to each subject and guiding their pupils into different ways of knowing that subjects provide : subjects create disciplined ways of knowing. It is clear that when there is a lack of subject expertise, or it is unevenly spread across teaching groups, then the quality of teaching and students exam results are at risk.

Moreover, there are countless examples of children and young people being motivated by teachers whose love of the subject they teach is so thrilling that it inspires pupils to pursue the subject themselves when they move to university and the world of work.

Subject knowledge not only inspires pupils and helps to achieve, it improves the quality of teaching. In the secondary sector, where the schools are frequently organised into subject departments, and departmental heads lead using their sub-

ject expertise as the basis of their authority, then subject leaders become a driving force for high quality teaching. Head teachers hold their heads of departments to account for pupils' achievements, progress and success in examinations. In turn, heads of subject departments use their own and their teams' expertise in subjects to ensure the children are taught to the highest levels.

In primary schools, it is harder for subject leadership to drive improvement. Ofsted (2009) noted that in primary schools : "Having a teacher with specific subject knowledge was often a matter of chance, although the effective primary schools knew this and took steps to minimise the risk of its absence.

They also found ways to identify and tackle weaknesses in teacher's subject knowledge, such as through links with partner schools, using advanced skills teachers or other experts, or securing focused professional development. The role of the subject leader was vital in developing and maintaining high quality teaching in individual subjects. Leaders had too limited a role and too little support to carry it out effectively.

So, primary schools should :

1. Ensure that they do as much as possible to provide access to an expert subject leader or the resources to nurture one for each subject.
2. Review their policies on the role of subject leader so that these are comprehensive and include the role of training other staff within the context of the school development plan.
3. Develop teacher's subject knowledge, taking account of the demands of different subjects identified in this and Ofsted's subject reports.
4. Seek links with neighbouring schools to share good practice and capitalise on local expertise.
5. Take advantages of subject-specific opportunities for continuing professional development.

In other words, subject leadership is important in both secondary and primary schools, although the latter need to take special steps to ensure there is support for all teachers in all the subjects.

Subject Knowledge is Important for a Teacher

A truly effective teacher understands that positive teacher-pupil relationships prevail and behavioural problems are less likely to exist in a classroom where learning opportunities are appropriately planned and resourced. It is widely believed that the characteristics of a good teacher are varied. On the whole, teaching standards fall into three main areas; subject knowledge, ability to relate to young people and effective use of methodologies.

An effective teacher should demonstrate ability in each of these categories. Subject knowledge is important as without it teachers cannot hope to deliver the requirements of the curriculum effectively.

Demanding challenges in the classroom can do without the inadequacies of poor knowledge and understanding on the part of the teacher. Teachers must be able to meet the needs of all pupils, from gifted and talented pupils who need activities which reach beyond average expectations to those with additional educational needs as well as those who do not belong in either of these categories.

Positive pupil relationships form an important part of effective teaching. Building positive relationships brings out the best in pupil performance. If a pupil has trust in their teacher's judgement and demeanour they are more likely to have the

confidence to ask more questions and have the willingness to improve their own work.

Effective teachers use a variety of methodologies and are well aware of the preferred learning styles. For example, if a pupil is shown to be a kinesthetic learner, then they are likely to enjoy practical aspects of learning with hands-on experience such as in the practical subjects. A good teacher will seriously contemplate the learning preferences of the pupils they are teaching.

So, effective teachers are passionate about educating their students. They want to spend their time teaching, not dealing with classroom disruptions.

Here are some classroom management tips to help teachers settle problems, or prevent them from occurring, so that they can spend more of the classroom hour on teaching and learning.

1. **Take Charge of Your Class :** Get everyone's attention before beginning class. That means the lesson won't be started, the lecture won't begin, and nothing will be written on the overhead until everyone is in his or her seat paying attention. It doesn't take a shout of "Let's be quiet" or "I won't start until everyone is ready" to get them to focus on you. It can be just as effective to walk to the front of the room and engage them with something interesting to them such as "My thermometer said it was zero this morning. It must have been freezing out there waiting for the bus" or "How many of you saw the Hunger Games?" Open with couple attention getting comments and continue until everyone is with you. Remember, don't start teaching until all eyes are on you and everyone is in their seat.
2. **Focus on the Disruptive Students :** If students aren't paying attention or busy doing other things, get them focused by using non verbal signals of disapproval. If they are talking, pause and look toward them. If in front of the class; continue with the lesson but walk toward the problem students and stop near their seats, while still teaching. Having you so near usually shuts off the unwanted activity as the rest of the class attention is directed toward the misbehaving students. If there is a discussion going, direct a question to the student who is not paying attention or misbehaving. For example, say "Rahul, would you agree that the Battle of Panipat was the turning point of the war or 1919?". Hearing his name will snap Rahul back to the class activity having the same effect without embarrassing him as if you had said, "Rahul, pay attention"! Remember to use his name when you begin to speak, otherwise he may not hear the question. Calling on a person by name brings almost anyone out of his or her reverie. If non-verbal cues are disregarded, the next step will be imposing discipline measures within the classroom such as having them stay a few minutes after class or changing the seat.
3. **Let Students Choose their Seats :** At the beginning of the school year, let students sit where they want for a few days. Then about the third day tell them that the next class period they should find a seat that they will keep permanently all year. When students choose their seats, they have "ownership" in those seats and tend to behave well in order to avoid being moved.
4. **Give Incentives to Do Their Best on Assignments :** If an assignment will not be collected and graded individually, students may feel they have no reason to make an effort to do a good job on the no-credit assign-

ment. For instance, a teacher will often do an ungraded warm-up exercise to begin the class hour.

Here's a strategy to elicit better performance on an ungraded assignment. Tell students you will randomly collect one person's warm-up assignment and correct it. If that paper has no mistakes, then the whole class will have a shorter (or no) warm-up the next day. If a randomly selected paper is perfect, that student instantly is the class hero.

If a student has not made a real effort, then that student will be given a short homework assignment, due the next day. He or she will be penalized if it is not done. (This home work cannot be done during class time). In most cases, students will work for peer approval by doing the assignment. Another strategy to motivate students to stay on task would be to have students who have not stayed on task remain after class for a minute. If there is no penalty for not working, they have no reason to work.

5. **Keep an Eye on Your Students :** Class goes so much better when you can see your students. Turn your back on them and you may get surprised. Position yourself so that most, if not all of the class is visible. Watchout for shelves, computer equipment or class supplies that can block your view. When teaching, try to be facing students as much as possible. As you work with a student at his or her desk, place your-self so you can see most of the class. As you move around the classroom, don't follow the same pattern. By varying your routine, it becomes harder for students to be disruptive if they don't know where you will be next.
6. **Establish Consequences for Misbehaving :** Good classroom management starts the first day of school. Once students learn there will be consequences for misbehaviour, they usually come around.

Here are three steps to help you set up consequences :

- (i) Determine what consequences will be effective with your students. Ask yourself what students don't want to have happen—for example, adolescent students hate staying after class, being moved from a seat they're chosen, or receive the disapproval of their peers. Make those your consequences. (The reverse is also true, "Find out what students want to have happen and make that a possibility." Classroom management doesn't have to be negative.)
- (ii) Tell students that there will be consequences for misbehaviour. First, you will put their name on the board. Tell them that how long they stay after class depends on how the rest of the hour goes. They now control their own destiny. If they behave, they will stay perhaps only a minute. If they continue to cause problems, they will stay longer. Tell them if they become a "model citizen," you might even erase their name.
- (iii) Follow through with consequences for misbehaviour. Show students that you are serious and they will take you seriously. Classroom management, especially with elementary and junior high age students, never ends. It is an ongoing process, but once the foundation is laid, it only takes occasional reminders.

Describe ideas for developing subject knowledge and pedagogy.

OR

Explain steps by which you improve subject knowledge.

OR

Why you need to improve the quality of professional training for teachers?

Ans. According to Sultan Trust Report, "The most effective teacher have deep knowledge of the subjects they teach, and when teachers knowledge falls below a certain level it is a significant impediment to student : learning. As well as a strong understanding of the material being taught, teacher must also understand the ways students think about the content, be able to evaluate the thinking behind students own method, and identify common misconception."

Here we discuss 10 ideas or steps/kinds of activities and resources that we have looked to try and introduce to help teachers and department and to develop their subject knowledge and subject pedagogy :

1. **Presentations and Seminars :** Giving presentations or running seminars on particular areas of strength is an exellent way of sharing the responsibility for developing subject knowledge across a department and for improving the ability of individuals to present to adult learners.

Some of our departments have developed their own subject knowledge audits to identify strengths and design seminar schedules across the course of the year. It is our intention to have audits for every subject; partly to pin point training needs, but also to help identify and, in turn, circulate expertise more easily, particularly across larger departments.

2. **Subject Knowledge Audits :** Identifying the spread of knowledge in a department is an important step in planning for the development of individual teachers and making sure the needs of the students are successfully met.

Subject audits also provide an excellent means of identifying existing areas of expertise, which can be harnessed for the benefit of others. Threshold concepts might be a good way to audit knowledge, but whatever methodology is used it is important that the subject knowledge requirements identified are genuine.

3. **Lesson Study :** Whilst Lesson study is often conducted by teachers from across a range of different subject areas, in many respects it makes more sense for three teachers from the same subject to get together to investigate a subject specific research enquiry question. Peter Dudley one of the architects of introducing this form of professional development activity into the country, certainly sees its benefits. Writing about the 'learning points' of groups working on pedagogical content knowledge, he notes how :

L.S. group members are held by the level of detail required in their planning and analysis discussions (which) forces even tiny difference of view about practice or content to become exposed. Even the teacher Development Trust and their Network of schools across the country provide considerable guidance and on going support with implementing Lesson study as part of an annual membership.

4. **Wider Reading :** Conducting wider reading or research takes time. Reading books, articles, reports and websites or blogs should therefore be seen as an entirely legitimate and justifiable professional learning activity. It may be that time is required to read a set text, or research recent developments in a subject area.

Academic and specialist journals are also available online and local universities often have subscriptions and electronic access to periodicals.

So, the collaborative discussions such as these can help fuel debate, identify student misconceptions and lead to a shared approach to explaining difficult concepts to children.

5. **Online Courses** : On line seminar courses and programmes offer an excellent way for teachers to connect with professional learning communities, including some of the most prestigious university departments and academic in the world. There are a number of different online courses, which are perfect for matching up subject specific needs with personalised learning programmes. Many of the courses are free and those that do charge are relatively inexpensive given the quantity and quality of the material provided. It would be entirely possible for both individuals and small groups of teachers to follow the same on line programme, or listen and discuss a particular lecture.

6. **University Links** : It is important for subject disciplines to stay connected with their learned communities. It is these communities, namely university departments, subject associations and professional bodies, that link classroom practice to current university research and help make sure that teachers have access to cutting edge insights into their subjects and the ways in which they those can be taught. It should be perfectly acceptable for teachers or members of a department to use department or INSET time to visit a university library and research information unavailable else where.

7. **Visits, Exhibitions and Public Lectures** : Visits to exhibitions, galleries or museums are often the only way for teachers to develop aspects of their subject expertise; perhaps seeing important works first hand, or learning about how an idea, style or topic is represented in different formats is useful. Public lectures by academics or subject experts are a useful means of enhancing professional knowledge. Whilst it is more economical and desirable for speakers to speak to entire departments, its not always been possible to arrange.

8. **School Collaboration** : The same principles of external and local collaboration should be encouraged across networks of local schools. It may be the case that individuals or whole departments in nearby schools and sixth form colleges have specific expertise that can be utilised for the benefit of all, with reciprocal arrangements organised. This could take the form of developing subject knowledge; or sharing specific insights and approaches gained from individuals working closely with examination boards or subject associations. In some instances, particularly in small similar departments and faculties, it may be beneficial to pair up colleagues with similar training needs for collaborative work.

9. **Leverage Coaching** : There are two main applications of the lesson observation equipment that can make a difference in supporting departments work on developing their understanding of effective subject pedagogy. The first is to develop a bank of master class videos illustrating different pedagogical techniques, contextualised within the subject and produced by members of the department.

10. **Subject Specific External Providers** : There are a number of providers of subject-specific training courses and development opportunities. Departments may wish to invite teachers who have been on external training to

feedback to the rest of the department, or to colleagues who would benefit from shared information. Subject professional associations offer another potential way of finding out about high quality subject-specific professional development opportunities.

ALTERNATIVES TO DISCIPLINARITY

- Define Disciplinarity. Write its importance in education.
OR
- What is Alternative Discipline? How is alternative discipline beneficial for employees?
OR
- Write a note on effective discipline for children.

Ans.

Meaning of Disciplinarity

According to Shumway, "Disciplinarity, the means by which a discipline constitutes its object to suit its needs and assumptions, and the ways in which a discipline regulate what counts as knowledge, who may speak, and what may be said."

According to Willa Cathers, "Disciplinarity too often limits exploration of knowledge and that inter disciplinary moves are inevitable in humanities and social sciences fields that have been transformed by social construction theory, structuralism, and poststructuralism—to the point where most humanists view knowledge as partial and historical knowledge as the concern of all who inquire, rather than the purview of a particular group of academic historians doing empirical history".

Disciplinarity is relating to discipline in behaviour; "disciplinary problems in the classroom", specific field of academic study; "economics in its modern disciplinary sense"; "the teachers action was corrective rather than instructional"; "disciplinal measure", 'The mother was stern and disciplinary'.

Meaning of Alternative Discipline

Alternative discipline is an alternative to traditional penalties for employee misconduct. It is a form of alternative dispute resolution that can be used to effectively resolve, reduce or even eliminate work place disputes that arise from circumstances where disciplinary action is appropriate. The traditional penalties which alternative discipline generally replaces are disciplinary actions, i.e.; letters of reprimand and suspensions of 14 days or less, and adverse actions, i.e.; suspensions of 15 days or more and removals. Last chance agreements are another form of alternative discipline.

Alternative discipline works or allows the supervisor or manager and an employee who has committed an infraction to negotiate and alternative form of corrective action in lieu of traditional discipline, provided that several basic criteria are met.

The agreement between the supervisor or manager and the employee is then formalized in a written "Alternative Discipline Agreement", which details all of the terms and conditions used to resolve the situation.

The following criteria considering whether alternative discipline may be appropriate or not :

1. The employee acknowledge responsibility for the behaviours giving rise to the need for corrective/disciplinary action, expresses remorse for such behaviour and agrees to not repeat the behaviour (s);
2. The supervisor or manager determines that alternative discipline has a good probability of preventing further misconduct by the employee;
3. The use of alternative disciplines in cases involving bargaining unit employees must not be precluded by a negotiated agreement. Note : Where a term of an alternative discipline agreement affects a condition of employment of one or more bargaining unit employees (other than the employee whose conduct is at issue), management is obligated to notify the union and give it the opportunity to exercise its representational rights.

How does Alternative Discipline Benefit the Organisation and the Employee?

1. **Less Negative Impact on the Supervisor/Employee Relationship :** The interactive process of developing an alternative discipline agreement between the supervisor and employee can provide common ground for preserving or repairing the employer - employee relationship, which is frequently negatively impacted after traditional discipline is imposed. The employee can be viewed as an individual who is willing to take responsibility for his/her actions and the supervisor can be viewed as willing to work with the employee and help restore or rebuild a cooperative work relationship. In addition, by actively participating in the process, an employee is more likely to fulfil the expectations agreed to and modify his/her behaviour appropriately.
2. **Addresses the Real Purpose of Discipline :** Discipline is meant to be remedial and corrective rather than punitive. Alternative discipline, with its focus on a collaborative, constructive outcome, is truly remedial.
3. **Time and Resource Savings :** As described more fully in the next section, alternative discipline may be offered at any stage of the disciplinary process. When alternative discipline is used before a traditional penalty has been proposed or decided, a significant savings in time and resources can be realized for the supervisor, the employee and the servicing Human Resources Office.
4. **Quicker Closure :** Because cases resolved by alternative discipline agreements are closed more quickly than traditional cases and because they include waivers of grievance, appeal and complaint rights, the matter is resolved and closed with the signing of the agreement. There are no lingering issues or litigation to disrupt the work of the organization or the relationship between the employee, his/her supervisor and the organisation as a whole.
5. **Productivity of the Employee :** The organisation retains the services of the employee instead of losing productivity in cases where the employee would have served a traditional suspension. There is little or no interruption to the daily flow of work and no need to temporarily inconvenience co-workers who may have to pitch in while an employee is serving a suspension.

Effective Discipline for Children

The word discipline means to impart knowledge and skill - to teach. How-

ever, it is often equated with punishment and control. There is a great deal of controversy about the appropriate ways to discipline children, and parents are often confused about effective ways to set limits and instil self-control in their child.

Discipline is the structure that helps the child fit into the real world happily and effectively. It is the foundation for the development of the child's own self discipline. Effective and positive discipline is about teaching and guiding children, not just forcing them to obey. As with all other interventions aimed at pointing out unacceptable behaviour, the child should always know that the parent loves and supports him or her. Trust between parent and child should be maintained and constantly built upon.

Parenting is the task of raising children and providing them with the necessary material and emotional care to further their physical, emotional, cognitive and social development. Disciplining children is one of the most important yet difficult responsibilities of parenting, and there are no short cuts. The physician must stress that teaching about limits and acceptable behaviour takes time and a great deal of energy. The hurried pace of today's society can be an obstacle to effective discipline.

The goal of effective discipline is to foster acceptable and appropriate behaviour in the child and to raise emotionally mature adults. A disciplined person is able to postpone pleasure, is considerate of the needs of others, is assertive without being aggressive or hostile, and can tolerate discomfort when necessary. The foundation of effective discipline is respect. The child should be able to respect the parent's authority and also the rights of others. Inconsistency in applying discipline will not help a child respect his or her parents. Harsh discipline such as humiliation (verbal abuse, shouting name calling) will also make it hard for the child to respect and trust the parent. Thus, effective discipline means discipline applied with mutual respect in a firm, fair, reasonable and consistent way. The goal is to protect the child from danger, help the child learn self-discipline, and develop a healthy conscience and an internal sense of responsibility and control. It should also instil values.

One of the major obstacle in achieving these goals is inconsistency, which will confuse any child, regardless of developmental age. It can be particularly hard for parents to be consistent role models. Telling children to "Do as I say, but not as I do" does not achieve effective discipline. Parental disagreement about child-rearing techniques, as well as cultural differences between parents, often result in inconsistent disciplining methods. The physician needs to be mindful of these challenges and suggest steps that parents can take to resolve these differences. It is important that in teaching effective discipline, physicians do not impose their own agendas on the families they counsel. A balanced, objective view should be used to provide resources, and the goal should be to remain objective. This means using principles supported by academic, peer-reviewed literature. This is particularly important when dealing with controversial issues such as disciplinary spanking.

Basic Principles of Effective Discipline

Following principles can help guide the physician :

1. The purpose of effective discipline is to help children organize themselves, internalize rules and acquire appropriate behaviour patterns.
2. The temperaments of the child and the parents, particularly in the context of their sociocultural milieu, require flexibility. Children with special needs and developmental delay require additional adjustments and problem-solving.

3. Effective discipline does not instil shame, negative guilt, a sense of abandonment or a loss of trust. Instead, it instils a sense of greater trust between the child and the parent.
4. Anticipatory guidance offers physicians an opportunity for prevention, to discuss the type of discipline according to the child's developmental age. Undesirable behaviours are best avoided through prevention and by building supportive structures that include clear, consistent rules.
5. Physicians should take care to provide anticipatory guidance and appropriate support to parents who are under stress, isolated, disadvantaged or impaired. Physicians should be familiar with the resources in the family's community.
6. Physicians should consider the role of the parents in influencing the child's misbehaviour. For example, a depressed caregiver who is influencing the behaviour and development of a child may require referral to another appropriate professional.

School Age Children (Six Years to 12 Years)

The child's increasing independence may lead to conflicts. School age children tend to act autonomously, choose their own activities and friends, and to some extent, recognize other than parental authority. Parents should continue to supervise, provide good behavioural models, set rules consistently, but also allow the child to become increasingly autonomous. Parents should continue to make the important decisions because school-age children cannot always put reasoning and judgement into practice.

Praise and approval should be used liberally, although not excessively, to encourage good behaviour and growth into a more mature human being. The use of appropriate motivators should be encouraged: For example, buy a keen reader his or her favourite book.

Acceptable means of discipline include withdrawal or delay of privileges, consequences and time-out.

Setting Rules and Applying Consequences

Rules are established for children so they can learn to live cooperatively with others; to teach them to distinguish right from wrong, and to protect them from harm. Children raised without reasonable limits will have difficulty adjusting socially. The following are some ways that parents can use rules and limits to promote effective discipline:

1. Reinforce desirable behaviour. Praise positive behaviour and "Catch children being good".
2. Avoid nagging and making threats without consequences. The latter may even encourage the undesired behaviour.
3. Apply rules consistently.
4. Ignore unimportant and irrelevant behavior, e.g., swinging legs while sitting.
5. Set reasonable and consistent limits. Consequences need to be realistic. For example, grounding for a month may not be feasible.
6. State acceptable and appropriate behaviour that is attainable.
7. Prioritize rules. Give top priority to safety, then to correcting behaviour that harms people and property, and then to behaviour such as whining,

- temper tantrums and interrupting. Concentrate on two or three rules at first.
8. Know and accept age-appropriate behaviour. Accidentally spilling a glass of water is normal behaviour for a toddler. On the other hand, a child who refuses to wear a bicycle helmet after repeated warnings is being wilfully defiant.
9. Allow for the child's temperament and individuality (goodness of fit). A strong willed child needs to be raised differently from the so-called 'complaint child'.

Suggestions may be Helpful in Applying Consequences

1. Apply consequences as soon as possible.
2. Do not enter into arguments with the child during the correction process.
3. Make the consequences brief. For example, time-out (see forms of discipline) should last one minute per year of the child's age, to a maximum of five minutes.
4. Parents should mean what they say and say it without shouting at the child. Verbal abuse is no less damaging than physical punishment.

Follow consequences with love and trust, and ensure that the child knows the correction is directed against the behaviour and not the person. Guard against humiliating the child. Model forgiveness and avoid bringing up past mistakes.



Chapter-2

Paradigm Shifts in the Nature of Disciplines

HISTORY AND ORIGIN OF PEDAGOGIC SUBJECTS; PHILOSOPHICAL, SOCIOLOGICAL AND EDUCATIONAL PERSPECTIVE

Define Paradigm Shift. What is the importance of paradigm shift in education/discipline?

Ans.

Meaning of Paradigm Shift

Paradigm shift is set of assumptions, concepts, values, and practices that constitutes a way of viewing reality for the community that shares them, especially in an intellectual discipline.

According to Web Dictionary, "It is an important change that happens when the usual way of thinking about or doing something is replaced by a new and different way".

Wikipedia defined Paradigm Shift as : It is a fundamental change in the basic concepts and experimental practices of a scientific discipline.

Paradigm shift is a fundamental change in an individual's or a society's view of how things work in the world. For example, the shift from earth to sun as the center of solar system, 'humors' to microbes as causes of disease, heart to brain as the seat of thinking and feeling.

There was a significant paradigm shift in the classroom when the original teacher was replaced by clearly inexperienced substitute.

Importance of Paradigm Shift in Education/Disciplines

The most significant issue relating to learning is the relatively recent paradigm shift in education. This change is illustrated in the way in which curriculum is defined and technology is used. The distinct roles of teachers and learners are becoming increasingly blurred.

Education is no longer defined in terms of what a teacher will teach but rather in terms of what a student will be able to demonstrate. According to George Leonard, "To learn is to change. Education is a process that changes the learner." The new educational paradigm emphasis on content, acquiring a body of right information

emphasis on learning how to learn, how to ask questions. Pay attention to the right things, be open to and evaluate new concepts have access to information. Context is important. The characteristics of new educational paradigm are :

1. Learning as a product, destination. Learning is a process.
2. Relatively rigid structure, prescribed curriculum, flexible structure, belief that there are many ways to teach given subjects.
3. Priority on performance and self image as the generator of performance.
4. Guessing and divergent thinking encouraged as part of the creative process.
5. Emphasis on analytical linear left brain thinking strives for whole-brain education.
6. Labelling used only in minor prescriptive role and not as a fixed evaluation.
- Concerned with the individual's performance in terms of his potential.
- Emphasis on teaching everyone learns when they are ready developmentally.
- Classroom designed for efficiency, convenience, it concerns for the environment of learning-lighting, colours, physical comfort, needs for privacy and interaction, quiet and exuberant activities.
- Teacher imparts knowledge, the new assumptions lead to questions about how to motivate for lifelong learning, to strengthen self-discipline and awaken curiosity and how to encourage creative risk. So learning as the reward, grades are secondary.

According to Marilyn Ferguson, "The larger paradigm looks to the nature of learning rather than methods of instruction. Learning after all is not schools, teachers, literacy, math, grades or achievement. It is the process by which we have moved every step of the way since we first breathed, a transformation that occurs in the brain. Whenever new information is integrated, whenever a new skill is mastered, learning is kindled in the mind of the individual.

Twentieth century paradigm shifts across a wide variety of fields can be seen as part of a larger shift from positivism to post-positivism. In second language education, the principal paradigm shift over the past 40 years flowed from the positivism to post-positivism shift and involved a move away from the tenets of behaviorist psychology and structural linguistics and toward cognitive, and later, socio-cognitive psychology and more contextualized, meaning based views of language. Key components on this shift concerned :

1. Focusing greater attention on the role of learners rather than the external stimuli learners are receiving from their environment. Thus, the center of attention shifted from the teacher to the student. This shift is generally known as the move from teacher-centered instruction to learner-centered or learning-centred instruction.
2. Focusing greater attention on the learning process rather than on the products that learners produce. This shift is known as a move from product-oriented instruction to process-oriented instruction.
3. Focusing greater attention on the social nature of learning rather than on students as separate, de contextualized individuals.
4. Helping students to understand the purpose of learning and develop their own purposes.
5. Focusing greater attention on diversity among learners and viewing these

differences not as impediments to learning but as resources to be recognized, catered to and appreciated. This shift is known as the study of individual differences.

6. Focusing greater attention on the views of those internal to the classroom rather than solely valuing the views of those who come from outside to study classrooms, evaluate what goes on there and engage in theorizing about it. This shift led to such innovations as qualitative research - with its valuing of the subjective and affective, of the participants insider views and of the uniqueness of each context.
7. Along with this emphasis on context came the idea of connecting the school with the world beyond as a means of promoting holistic learning.
8. A whole-to part orientation instead of a part-to whole approach. This involves such approaches as beginning with meaningful whole texts and then helping students understand the various features that enable the texts to function; e.g.; the choice of words and the texts organizational structure.
9. A emphasis on the importance of meaning rather than drills and other forms of rote learning.
10. A view of learning as a lifelong process rather than something done to prepare for an exam.

The paradigm shift in second language education outlined above has led to many suggested changes in how second language teaching is conducted and conceived. In this section, we consider eight major changes associated with the shift in the second language education paradigm. We selected these eight because of the impact they already have had on our field and for the potential impact they could have if they were used in a more integrated fashion.

'Philosophy and Education are like the two sides of a coin'. How far do you agree with the statement? Justify your answer by citing examples.
OR

"Education without philosophy is blind and philosophy without education is invalid." In the light of this statement discuss the relationship between Philosophy and Education.
OR

Relationship between Education and Philosophy.
OR

Explain the philosophical and educational perspective of disciplines.
[June, 2018]
OR

"All questions of education are ultimately the questions of philosophy".

Ans.

Relationship between Philosophy and Education

Philosophy and education are interrelated and inter-dependent. Both go hand with each other. Education is the process and philosophy is the product. Philosophy is the foundation out of which emerges the objectives of education.

According to Ross, "Philosophy and education are like the two sides of the same coin; the one is implied by the other, the former is the contemplative side of life, while the latter is the active side."

John Adam states, "Education is the Dynamic side of Philosophy." According to John Dewey, "Philosophy is the theory of education in its most general phase." "Education is a laboratory in which philosophical distinctions, become concrete and are tested."

According to Fichte, "The art of education will never attain complete learnedness in itself without philosophy." According to Rusk, "Philosophy formulates what it conceives to be the end of life, education offers suggestions how this end is to be achieved."

Let us see how philosophy and education are inter-related :

1. **Philosophy Deals with the Ends and Education is the Means to Achieve those Ends :** Philosophy fixes up values, suggests ideals and lays down the principles. Education tries to achieve them. That is why Herbert says, "Education has no time to make holiday till all the philosophical questions are once for all cleared up."
2. **Philosophy and Education are Two Sides of the Same Coin :** Philosophy and education are interrelated like flower and fragrance, skeleton and flesh, shadow and substance. The former is the contemplative side, while the latter is the active side of the same coin. The value of philosophy can be realized through education and vice-versa.
3. **Education Teaches What Philosophy Believes :** Education teaches people what philosophy believes. Education, thus, is used by the philosophers for the purpose of ideological propaganda. One of the outstanding instances of philosophy is using education for the purpose of propagation is Buddha and his followers.
4. **Great Philosophers have also been Great Educationists :** The great philosophers like Gandhi, Tagore, Radhakrishnan, Plato, Socrates, Rousseau and Dewey have also been great educators. Their philosophical views and thoughts clearly reflected in the educational schemes propagated by them. Ross rightly said, "If further agreement is needed to establish the fundamental dependence of education on philosophy it may be found that all great philosophers have been great educationists.
5. **Philosophy is the Basis of Different Aspects of Education :** The aims, curriculum, methods of teaching, classroom discipline, time-table etc. are determined by philosophy. Thus education and philosophy are interrelated and interdependent. The salient features of their relationship are as under :
 - (a) Philosophy assists education and the educator in formulating beliefs, arguments, assumptions and judgements concerning teaching and learning, character and intellect, subject matter, and skill, desirable ends appropriate means of schooling.
 - (b) Philosophy is the foundation to decide the goals of life. Education equips people to achieve these goals appropriately.
 - (c) Philosophy influences almost all aspects of education.
 - (d) Philosophy suggests the values to be pursued in life. Education inculcates these values in the learners.
 - (e) Philosophy is the theory, while education is the practical side. Philosophy is contemplative whereas education is dynamic.
 - (f) Philosophy determines what is worth living. Then education educates the man. It prepares him for that type of life which is worth-while.

(g) Philosophy helps in clarifying various educational issues and problems.

Impact of Philosophy on Education

Education is mainly dependent on philosophy. Every aspect of education has a philosophical base. It is philosophy which provides various aspects of education such as aims of education, curriculum, the methods of teaching role of the teacher pattern of classroom discipline and so on. It can be discussed as given below :

- Philosophy and Aims of Education :** Education is a planned and purposeful activity. It has manifold aims. These aims and objectives are formulated by the philosophy of life. It is again philosophy which formulates the aims of education. In the words of Rusk, "Philosophy formulates what it conceives to be the end of life education offers suggestions how this end is to be achieved."
- Philosophy and Curriculum :** What should be the curriculum to be taught to all? What should differential curriculum be given to children? Philosophy supplies answer of these and many similar questions in the realism of curriculum. Curriculum is the design of education. It is through curriculum that desired behavioural changes are sought to be achieved to attain the goals of life of the learners. It is philosophy which decides why a particular subject should be included in the curriculum. Idealists emphasise higher values of life. They prescribe the study of religion, ethics, literature and humanities to be included in the curriculum. Naturalists are mainly concerned with physical science and direct experiences. Pragmatists mainly stress on the study of functional subjects and social sciences. Thus it is clear that philosophy is the background of every type of curriculum.
- Philosophy and Methods of Teaching :** The teacher may be teaching but the child may not be learning. It is here that philosophy heralds that learning does not take place. Philosophy guides the teacher to adopt a suitable method of teaching. Kilpatrick's use of the term "Philosophy of methods" shows that there is a close relation between educational method and philosophy. In fact, every school of philosophy has its own methods of teaching. Idealists advocate question-answer method, Lecture and discussion method. Naturalists recommend learning by doing, self-learning and direct-experiences. Pragmatists advocate for project method, problem solving method etc.
- Philosophy and Discipline :** The nature and concept of discipline is also governed by philosophy. Discipline reflects the philosophy of life. It reflects a particular ideology. Whether school discipline should be strict or flexible is also a philosophical problem. It reflects the social, political, economic and philosophical thinking of a particular country. Discipline is determined by these factors. The modern concept of discipline is based on the principle of democracy and social philosophy.

- Philosophy and the Teacher :** Philosophy has a great influence on the teacher's thinking and behaviour. Every teacher is a philosopher and guide. He influences students, personality and give them a new outlook of life. An ideal teacher is a man of higher ideals. Naturalism considers the teachers as a stage setter. He does not interfere in the education of the child in a direct way. In pragmatism a teacher is supposed to be a friend and guide. He facilitates the process of growth of an individual. In fact, there is a specific role for the teacher in educational process. Philosophy rather gives direction to the teacher. That is why Henderson remarks; "It is important for a teacher to know some philosophy. He needs philosophy as a teacher."
- Philosophy and Text Books :** The choice of textbooks also involves philosophy. They should be as per the needs of the students and the society. The text-books must make the students ideal, natural and practical in life. So, philosophy has its role in the choice of text-books.
- Philosophy and Students :** Every school of philosophy has its own concept about the students. It determines the concept and place of students. It also states the relationship between teachers and students. Idealism advocates that students should realise his self through education. Naturalism considers that the student is the pivot of the whole educational process. On the other hand, Pragmatism advocates that students should be socially efficient.
- Philosophy and School Administration :** The school administration is mainly dependent on the head of the school. His way of administration is influenced by different schools of philosophy. If the head of the school believes in naturalism, he would provide liberal atmosphere in the school. He would handle the situation in a democratic way. An idealist head of the school stresses on spiritual, moral and intellectual development of the students. Thus, philosophy can tell him the guiding principles for the administration of the school.
- Philosophy and Evaluation :** Evaluation is the process through which we can get the exact idea of what students have actually learnt the teaching. According to conservative philosophers, evaluation judges the intellectual development of the students and mastery over the subject-matter. But the liberal school of thought gives emphasis on the development of the whole child. They say that mere intellectual or academic achievement is not the issue of evaluation. Thus the child can be evaluated in various ways through different schools of philosophy.
- Philosophy and School Type :** What type of school building should be there? This question is also answered by philosophy. Naturalism lays stress that an ideal school should be built in the natural environment, with playgrounds, open spaces and workshops and laboratories in the school so that social adjustment of the child may take place.

UNDERSTANDING SUBJECT, INTERDISCIPLINARY, MULTIDISCIPLINARY AND TRANS-DISCIPLINARY

What is interdisciplinarity studies or knowledge? Mention the importance of teaching with an interdisciplinary approach.

Ans. Interdisciplinarity involves the combining of two or more academic disciplines into one activity (e.g., a research project). It is about creating something new by crossing boundaries, and thinking across them. It is an interdisciplinary field, which is an organizational unit that crosses traditional boundaries between academic disciplines or schools of thought as new needs and prosessions emerge.

The term interdisciplinary is applied within education and training pedagogies to describe studies that use methods and insights of several established disciplines or traditional fields of study. It involves researchers, students and teachers in the goals of connecting and integrating several academic schools of thought, professions, or technologies - along with their specific perspectives. It also used in educational circles when researchers from two or more disciplines pool their approaches and modify them so that they are better suited to the problem at hand, including the case of the team-taught course where students are required to understand a given subject in terms of multiple traditional disciplines. For example the subject or in different disciplines like biology, chemistry, geography and politics.

Importance of Teaching with an Interdisciplinary Approach

It is helpful for students or learners to develop knowledge; insights, problem solving skills, self confidence, self efficacy, and a passion for learning are common goals that educators bring to the classroom, and interdisciplinary instruction and exploration promotes realization of these objectives. So, a number of distinct educational benefits of interdisciplinary learning including gains in the ability to :

- (i) Recognize bias
- (ii) Think critically
- (iii) Tolerate or Embrace ambiguity
- (iv) Acknowledge and appreciate ethical concerns

1. Interdisciplinary Teaching Helps Students Uncover Preconceptions or Recognize Bias : Interdisciplinary instruction allows us to understand our preconceptions of "what is" and the framework by which we arrived at 'what is'. It is also helpful to foster learning process and brings powerful pre-existing ideas. It helps students overcome a tendency to maintain preconceived notions.

This is accomplished by recognizing the source of the pre-existing understandings they arrive with, and by introducing students to subject matter from a variety of perspectives that challenge their existing notions. Interdisciplinary instruction accomplishes this goal in two ways. First, by helping students identifying insights from a range of disciplines that contribute to an understanding of the issue under consideration. Second by helping students develop the ability to integrate concepts and ideas from these disciplines into a broader conceptual framework of analysis.

When students put aside their pre-existing notion they position themselves to learn facts more readily and are more open to adopting a range of methodologies that promote understanding. Teachers can thus spend more time exploring issues with them that promote significant learning.

2. It Helps in Advance Critical Thinking and Cognitive Development : Interdisciplinary instruction helps students develop their cognitive abilities - brain - based skills and mental processes that are needed to carry out tasks.

By this quality students develop an appreciation of the differences between disciplines on how to approach a problem and their discipline specific rules regarding viable evidence. This leads to a broader understanding of the issue under investigation. It develops structural knowledge - both declarative and procedural knowledge.

Thus, as students enhance their knowledge formation capacity, teachers can engage them in conversations dealing with more complex issues. By obtaining a clear understanding of problems with roots in multiple disciplines requires the capacity to integrate ideas and this skill is advanced by interdisciplinary learning.

3. Interdisciplinary Teaching Helps Students' tolerate or Embrace Ambiguity : Interdisciplinary instruction helps students understand why conflicts commonly arise over; the causes and consequences of an issue and, the ideal way for policy to address the issue of concern. When learning is confined to a single disciplinary perspective ambiguity is often considered either a shortcoming of the analytical framework or evidence that assumptions need to be adopted to provide a clear prediction.

Thus, students acquire a better understanding of the complexity of problems of interest and the associated challenges of solving them.

4. Interdisciplinary Teaching Helps Students Appreciate Ethical Dimensions of Concerns : Interdisciplinary instruction helps students understand that there are ethical dimensions to most issues of concern. Ethical considerations entail moral concerns which means accounting for perceptions of right vs. wrong, good vs. bad, and the provision of justice. It promotes the integration of ideas from relevant disciplines- including moral philosophy when exploring an issue, so ethical considerations are often part of an interdisciplinary examination of an issue. This is useful since or perspectives on a question and policy considerations are likely to include discussion and valuation of ethical factors.

In spite of all, Fink identifies 6 elements of the educational process that lead to significant learning and each of these is a common feature of interdisciplinary forms of instruction.

1. **Foundational Knowledge :** acquiring information and understanding ideas.
2. **Application :** acquiring and understanding of how and when to use skills.
3. **Integration :** the capacity to connect ideas.
4. **Human Dimension :** recognition of the social and personal implications of issues.
5. **Caring :** acknowledgment of the role of feelings, interests, and values.
6. **Learning How to Learn :** obtaining insights into the process of learning.

Interdisciplinary instruction fosters the acquisition of foundational knowledge, promotes integration of ideas from multiple disciplines and provides insight on how to apply knowledge all of which advance students understanding of how to learn. Moreover, students are encouraged to account for the contribution of disciplines that highlight the roles of caring and social interaction when analyzing problems. Thus, the very structure of interdisciplinary learning is consistent with the core features of significant learning, so students are expected to find interdisciplinary education engaging and thus an effective way to advance their understanding to topics under investigation.

We know that this type of study allows the student to learn by making connections between ideas and concepts across different disciplinary boundaries. Students learning in this way are able to apply the knowledge gained in one discipline to another different discipline as a way to deepen the learning experience.

The most effective approach to interdisciplinary study enables students to build their own interdisciplinary path way by choosing courses which make sense to them. For example, it is not too difficult to find a theme which crosses over disciplinary boundaries in literature, art and history or science and mathematics. Studying topics thematically is one way to bring ideas together resulting in more meaningful learning. This can occur by allowing students to choose their own subjects and their learning is deepened when they reflect on the connections between what they are learning in different disciplines.

Here are some other benefits of studying in this way :

1. Students are highly motivated as they have a vested interest in pursuing topics that are interesting to them. As a result, the content is often rooted in life experiences, giving an authentic purpose for the learning and connecting it to a real world context. Consequently, the learning becomes meaningful, purposeful and deeper resulting in learning experiences that stay with the student for a lifetime.
2. Students cover topics in more depth because they are considering the many and varied perspectives from which a topic can be explored.
3. Critical thinking skills are used and developed as students look across disciplinary boundaries to consider other viewpoints and also begin to compare and contrast concepts across subject areas.
4. Students begin to consolidate learning by synthesizing ideas from many perspectives and considering an alternative way of acquiring knowledge.
5. Exploring topics across a range of subject boundaries motivates students to pursue new knowledge in different subject areas.
6. Transferable skills of critical thinking, synthesis and research are developed and are applicable to future learning experiences.
7. Interdisciplinary knowledge and application of different disciplines can lead to greater creativity.
8. Worth while topics of research can fall in the 'spaces' between the traditional disciplines.

So, this approach is sure to foster a love of learning, ignite a spark of enthusiasm and address learning differences for students.

What is Multidisciplinary Approach? Discuss its importance in nature of disciplines.

OR

Define Multidisciplinary approach. Write its advantages and disadvantages.

Ans. Multidisciplinary knowledge is associated with more than one existing academic discipline or profession.

A multidisciplinary community or project is made up of people from different academic disciplines and professions. A multidisciplinary person is one with degrees from two or more academic disciplines. This one person can take the place of two or more people in a multidisciplinary community.

Multidisciplinary approaches also encourage people to help shape the innovation of the future. It leads to better skills in communication, collaboration and

professional abilities, a better understanding of the collaborative process. It has a positive effect on future career development and sense of achievement. Design education also regards multidisciplinary collaboration as an important element for the generation of products of disruptive innovation. Although the concept is well accepted, there are limited studies on the influences of multidisciplinary collaboration on design education.

Multidisciplinary collaboration consisting members with different professional backgrounds and skills that can compensate each other and work together toward the same direction to achieve the same goals. It is useful because these different backgrounds of a multidisciplinary team could provide different viewpoints and experience for better brain storming across cultures.

The Advantages of Multidisciplinary Collaboration

The following are the advantages of multidisciplinary collaboration, which are derived from the interview :

1. **It Improves Communication Ability :** One of the most significant advantages of multidisciplinary collaboration is that all collaborators are forced to communicate either to keep their ideas or to avoid complex programming efforts. This was reflected in their responses.
2. **Foster Collaboration Skills :** Multidisciplinary collaboration fosters collaboration skills especially with partners of different backgrounds. The lack of shared common language and knowledge requires better collaboration skills. Not only by being friendly and flexible, but also by sharing your own ideas in a mild-mannered way.
3. **Positively Beneficial for Future Career Development :** It gives students a sense of reality and prepares them for design practice in industry where every project is implemented for real. At the same time, the process gives them the self-confidence to cope with their future career.
4. **Improve Sense of Achievement and Professional Abilities :** The realistic design project takes enormous time and effort to finish. However, to be able to see his/her own design realized often provokes a very strong sense of achievement since most of the design student's work remind in concepts even with realistic physical or digital models.
5. **Different Professions Complement Each Other :** In design education, it is not usual to work in a heterogeneous group for a whole year. However, this experience gives everyone an opportunity to observe different ways of development and to learn how to work as a team by complementing each other.
6. **Get Acquainted with the Collaborative Process of Product Development :** The process of multidisciplinary collaboration is hard to learn without real experience, so the advantage of having such collaboration in education is to become acquainted with the complex process in industry.

Disadvantages of Multidisciplinary Collaboration

1. **Time Pressure :** One of the disadvantages was the time constraint. For a multidisciplinary team, they need to not only finish their own work, but also spend time communicating and responding to the modifications given counterparts. The latter two elements do not exist in a non-collaborative process.

2. **Differences in Backgrounds** : The other disadvantage was caused by the differences in the backgrounds of the collaborators. The first difference was in the level of their careers. The working schedule of a designer, being a master's student, was very different to the working schedule of an engineer, being a full-time programmer at a company. Generally a student tended to work from noon to midnight, while a company programmer tended to work from morning to afternoon. Therefore, they had very little mutually convenient time to discuss the details of the project.

So, this research project intended to explore the influence of multidisciplinary collaboration in design education. We have recorded three complete design processes based on the ideas of design thinking with the features of user centered design, multidisciplinary collaboration, and a fully functional product. All the participants were interviewed and the result shows multidisciplinary collaboration resulted in better skills in communication, collaboration, and professional abilities, a better understanding of collaborative process and how the different professions complement each other, a positive influence on future career development and a sense of achievement.

Only a few disadvantages were mentioned, which included issues caused by time pressures and different backgrounds. The results contribute to the implementation of design thinking in design education. Future studies would explore the influence of user-centered design and prototyping in order to connect the design practice into design-education.

- What is Trans-disciplinary approach/knowledge? How is it essential in global education system?

OR

- Define Trans-disciplinarity. Discuss its importance in present education disciplines.

Ans. A transdisciplinary approach refers to learning that is authentic and relevant to the real world. Learning is not confined by traditional subjects but is supported and enriched by them. Each Transdisciplinary Theme encompasses a vast swath of universal understandings common to all of humanity and open enough to embrace a variety of context areas. As the prefix "trans" indicates, transdisciplinarity concerns that which is at once between the disciplines across the different disciplines; and beyond each individual discipline. Its goal is the understanding of the present world, of which one of the imperatives is the overarching unity of knowledge. In transdisciplinary research or collaboration in which exchanging information, altering discipline-specific approaches, sharing resources and integrating disciplines achieve a common scientific goal. It allows investigators to transcend their own disciplines to inform one another's work, capture complexity, and create new intellectual spaces. According to Harvard Transdisciplinary research center, it is defined as research efforts conducted by investigators from different disciplines working jointly to create new conceptual, theoretical, methodological, and translational innovations that integrate and move beyond discipline specific approaches to address a common problem.

According to Basarab Nicolescu, "Through three methodological postulates—the existence of levels of reality, the logic of the included middle, and complexity. In the presence of several levels of reality, the space between disciplines and beyond disciplines is full of information.

Importance in Global Education System

Transdisciplinarity can be also found in Global Education. According to an international Global Education Magazine, "Transdisciplinarity represents the capable germ to promote an endogenous development of the evolutionary spirit of internal critical consciousness, where religion and science are complementary.

Respect, solidarity and cooperation should be global standards for the entire human development with no boundaries. This requires a radical change in the logical models of sustainable development, global education and world society. As well as biodiversity is the way for the emergence of new species, cultural diversity represents the creative potential of the world society.

Transdisciplinary refers to the integration of diverse forms of research, and includes specific methods for relating knowledge in problem-solving. It can also help to determine the most relevant problems and research question involved. It is used to signify a unity of knowledge beyond disciplines. Transdisciplinary research is the inclusion of stakeholders in defining research objectives and strategies in order to better incorporate the diffusion of learning produced by the research.

Collaboration between stakeholders is deemed essential not merely at an academic or disciplinary collaboration level, but through active collaboration with people affected by the research and community based stakeholders. In such a way, transdisciplinary collaboration becomes uniquely capable of engaging with different ways of knowing the world, generating new knowledge, and helping stakeholders understand and incorporate the results or lessons learned by the research.

In fact this approach links concepts and skills through a real world context. Inquiry is one of the biggest differences in this learning approach verses the others. Transdisciplinary learning objectives require students to find answers to questions not only and questions they might have about the content. Transdisciplinary learning approach promotes depth of understanding as well as adaptability to skills needed to succeed in our changing world."

In this way, transdisciplinary learning is the exploration of a relevant issue or problem that integrates the perspectives of multiple disciplines in order to connect new knowledge and deeper understanding to real life experiences.

Transdisciplinarity is a growing field of education and research that holds great potential to make an important contribution to a sustainable change.

Transdisciplinarity has evolved from the earlier research fields of multidisciplinarity and interdisciplinarity. Multidisciplinarity is defined as research that studies a topic not only in one discipline but in several at the same time. Interdisciplinarity concerns the links and the transfer of knowledge, methods, concepts and models from one discipline to another. Transdisciplinarity instead involves what is between the disciplines, across the disciplines and beyond the disciplines. Multidisciplinarity and interdisciplinarity remain within the frame work of disciplinarity which is concerned with one level of reality, or fragments of that one level. Transdisciplinarity is interested in the dynamics of simultaneous action of several layers of reality.

The goal of transdisciplinarity is the holistic understanding of the world and the unity of knowledge that is required for this understanding. The transdisciplinarity approaches could provide people not only with the tools to understand reality but also to confront the changes taking place around them. It develops a new vision and a new experience of learning.

APPROACH WITHIN DIFFERENT SUBJECTS

□ Describe approach to different subjects. How does this approach make up a true curriculum?

Ans. Though we teach a connected curriculum, we believe that children have the right to the knowledge, skills and applications in the real world that each subject has to offer. Aspects of different subjects will be taught through specific subject-based learning, in mathematics in particular, children need to learn key concepts in order that they can apply them in problem-solving contexts. While planning units of works we :

- highlight connections between ideas in different subject areas.
- incorporate the distinct skills and approaches of different subject areas.
- aim to develop awareness of what expertise looks like in each subject area i.e.; what it means to be a mathematician, historian etc.

In fact our curriculum is based on the 2014 National curriculum which requires all pupils aged between 5 and 11 years to study the following three core subjects :

1. English
2. Mathematics
3. Science

Eight non-core subjects (known as foundation subjects) must also be studied in this age group. They are :

4. Computing
5. Religious Education
6. History
7. Geography
8. Art and Design
9. Design and Technology
10. Music
11. Physical Education

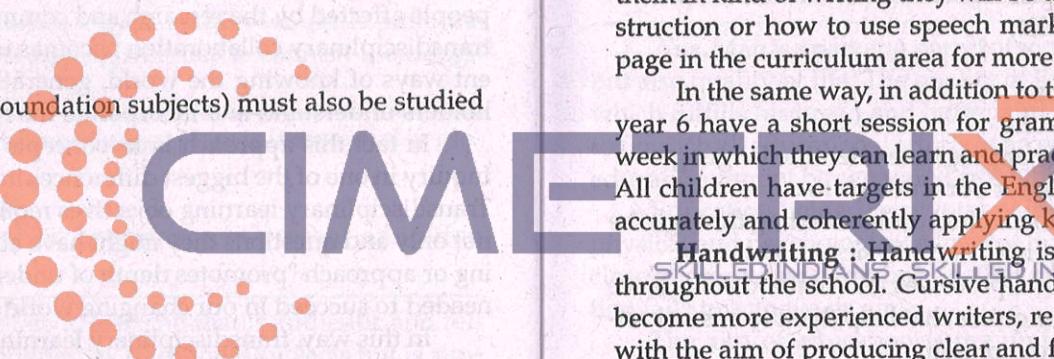
Each subject has its own objectives that are woven into our curriculum. Where possible, we link objects from more than one subject; for example using the mathematical skill of interpreting data when analyzing the results of a science investigation. First we core subjects :

1. **English** : We use English to communicate in both written and spoken form. We use language to build our view and opinion of the world and our community. We continue to learn, develop and enhance our knowledge and understanding of English throughout our lives. This subject underpins everything we do. So we are committed to doing all we can to ensure that every child makes the best progress they can.

English is taught daily with work appropriately differentiated to match all abilities.

With parental support, we want our children to :

- Speak clearly and confidently in any situation
- Listen actively and respond appropriately developing knowledge and opinion
- Read fluently for both pleasure and information
- Write clearly and with confidence in any given genre.



- Use spelling rules, phonics and grammar accurately
- Be able to profit read their own work make amendments and improvements.

Reading : Reading spans the curriculum and it is a source of pleasure and discovery as well as a means of instruction. We read stories to and with children, demonstrating that books are a source of enjoyment and a way of connecting to the wide world-both real and imaginary. We encourage children to read a range of books and to talk about them both at home and at school. So, reading section on the English page in the curriculum area for more information about how we teach reading.

Writing : Our aim is to teach children to write effectively in a variety of styles and for different purpose. Children are motivated to write through purposeful tasks and the expectation of high-quality outcomes linked to all aspects of the curriculum. We expect all our pupils to take a pride in their writing.

Children study different types of texts, learning the skill of writing by examining how authors write. Children are shown the processes involved in writing, starting with collecting ideas for writing through perhaps drama, reading, note taking and research. So, we teach them different aspects of grammar that will support them in kind of writing they will be doing. For example how to vary sentence construction or how to use speech marks accurately. Writing section on the English page in the curriculum area for more information about how we teach writing.

In the same way, in addition to their English lessons, all classes from year 2 to year 6 have a short session for grammar, punctuation and spelling four times a week in which they can learn and practise key skills such as sentences construction. All children have targets in the English books while encourage children to write accurately and coherently applying knowledge of grammar and punctuation.

Handwriting : Handwriting is an important skill that is carefully taught throughout the school. Cursive handwriting is introduced in year 2. As children become more experienced writers, regular handwriting practice is still carried out with the aim of producing clear and fluent handwriting.

Phonics and Spelling : Children are supported to monitor their own spelling by correcting key words in their writing books.

Speaking and Listening : Although speaking and listening comes under English in the National curriculum, the entire curriculum is exploited for this purpose because it not only fosters, children's intellectual development and enjoyment of learning but all boosts their self-confidence, social and emotional development and motivation to learn.

2. **Mathematics** : "Mathematics is not just a collection of skills, it is a way of thinking. It lies at the core of scientific understanding, and of rational and logical argument."

Mathematics is important in everyday life. It is integral to all aspects of life and with this mind we endeavour to ensure that children develop a healthy and enthusiastic attitude towards mathematics that will stay with them.

The new curriculum outlines a clear set of end of year expectations for each year group and has three main aims to ensure that all pupils :

- Become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.

- Reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- Can solve problems by applying the mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solution.

3. **Science** : 'Science is valuable because it meshes with all our lives and allows us to channel and use our spontaneous curiosity'.

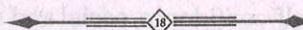
In the teaching of science, it is our aim to help each child develop an enquiring mind and a scientific approach to problems through the development of particular skills, attitudes, knowledge and understanding. Science is concerned with exploration and discovery of the world and excites pupils' curiosity.

Science links direct practical experience with ideas and knowledge, it can engage learners at many levels. Scientific method is about developing and evaluating explanations through experimental evidence and modelling. Practical experiences and scientific investigation are the basis of most of our science work. Children are provided with situations that stimulate them to ask questions. To develop their ability to think scientifically, we teach strategies and skills that will enable them to :

1. Plan, hypothesise and predict results
2. Observe, research and compare
3. Design and carry out investigations
4. Explain, interpret and evaluate results
5. Communicate their findings clearly appropriate scientific language.

Through our science curriculum, we aim for our students to :

1. develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics.
2. develop understanding of the nature, processes and methods of science through different types of science enquires that help them to answer scientific question about the world around them.
3. be equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.



Chapter-3

Education as Interdisciplinary Knowledge

Explain the education as interdisciplinary knowledge. How all subjects are related to each other in education?

OR

What do you mean by Interdisciplinary approach in the education? Give its importance in education system.

Ans. Man is a part and parcel of society. He not only satisfies his quality of living but also quality of life. The quality of living enhances his economical aspect of life, which fulfills his bread and butter aim. On the other hand, the quality of life helps to flourish all educational efforts in an equitable social order. Thus it can be said that education cannot be separated from the real life experiences.

Education being the pivotal point around which ethical, religious, spiritual, physical and psychological aspect of human being revolve. All these aspects are so closely interwoven with one another that if any of its aspects are removed, education fails to achieve its aim.

The aim of education is the unification of knowledge existing in different branches of learning. In social science, we study different aspects of human life and its various activities. The process of water-tight compartments of subjects will not give a clear picture of a complete society. Education is a social science in which we study educational activities of human beings in association with other members of a common society. Therefore there is a close relationship with other subjects. No subject can be taught in isolation. Education grows itself in society, made for the society and by the society, which go to develop a nation.

The existing system of education is alienated from real life. There is a gap between the subjects and the objectives and so cannot achieve the objective of national development. The following problems will reveal that there is a gap between the existing systems of education and real life situation :

1. Education does not attach importance to agriculture.
2. Education does not achieve the goal of economic development.
3. Schools and colleges do not stress on nation-building.
4. No importance is given to ethical, religious and spiritual values.

The national development objectives can be achieved if the above points are fulfilled as all the above facts are interrelated.

The objective of interdisciplinary approach is to give practical shape to the knowledge of various subjects. The education commission has clarified the idea by

giving the example of education as a subject. Therefore subjects like physics, chemistry, mathematics, economics etc. interrelated courses can be useful.

The Kothari Commission felt that the interdisciplinary approach should be dealt with departments having close relationship. For example education may be offered a new combination with subjects as education and psychology, education and philosophy and education and sociology. Philosophy is the reflective or the thinking process whereas the education deals with the implementation of things already philosophized.

Psychology as the science of behaviour with education tries to bring out in man's personality. Similarly sociology is the science of society of which education is a part.

For the success of interdisciplinary approach, Kothari Commission established educational departments in four or five universities with the help of U.G.C. These departments will :

1. Ensure research development in interdisciplinary approach.
2. Organize summer training to encourage interdisciplinary approach.

Interdisciplinary approach is a technique or tool that establishes reciprocal relationship for better understanding of the subject. No knowledge is permanent unless we correlate one subject with the other. Knowledge is an indivisible whole and cannot be divided. There is a definite relationship between an engineer and a cotton producer because it is a joint venture of the two that a cloth is made. Correlation between subjects or inter-discipline is essential because it :

1. Makes knowledge stable.
2. Enables to acquire knowledge in a short period.
3. Develops interest in the reader.
4. Lightens the burden of curriculum.
5. Makes knowledge broad based.
6. Develops various human and social activities such as cooperation generosity, harmony etc.
7. Maintains correlation with life.

Education deals with activities in regard to his livelihood. Since livelihood cannot go on without other aspects of social life i.e; social values, norms and standards. Therefore education must be correlated with other subjects. This co-relation between education and other subjects can go hand in hand only if activities of one influence the activities of the other.

This interdisciplinary approach can be strengthened if in Educational research work people choose the topic of one discipline, which shows relevance to another discipline. This should be conducted by team working in interdisciplinary spheres. At the most one supervisor may be assisted by a co-supervisor, both having mastery over two different disciplines. Therefore the Ph.D. degree awarded will not possess stamp of one department but of two departments. For example the topic "A Critical Evaluation of Contemporary Indian Theories of Education", can be claimed by both the department of philosophy and education. It is highly philosophical as the topic deals with the philosophical thinking of the philosophers who are educationalists also.

Life is complex, therefore a liberal and eclectic approach should be encouraged. In order to study the complexities of education interdisciplinary study between the department of education, sociology, philosophy, psychology etc. is the need of the hour. Subjects like educational psychology, educational sociology, edu-

cational philosophy, comparative religious study etc. should be in vogue in the present day situation. Interdisciplinary approach is an excellent means to creating harmony between various levels and faculties. It is required for a long term plan for any specific study. Knowledge is a unity and in order to maintain its unitary nature, it is essential to adopt the interdisciplinary approach.

In this way interdisciplinary study allows the student to learn by making connections between ideas and concepts across different disciplinary boundaries. Students learning in this way are able to apply the knowledge gained in one discipline to another different discipline as a way to deepen the learning experience. The most effective approach to interdisciplinary study enables students to build their own interdisciplinary pathway by choosing courses which makes sense to them.

For example, it is not too difficult to find a theme which crosses over disciplinary boundaries in literature, art and history or science and mathematics. Studying topics thematically is one way to bring ideas together resulting in more meaningful learning. This can occur by allowing students to choose their own subjects and their learning is deepened when they reflect on the connections between what they are learning in different disciplines.

One of the biggest barriers to achieving true interdisciplinary study in education environments is the necessity for collaboration of educators. This can be difficult to achieve, but not impossible. Interdisciplinary teaching and learning is maximised when professionals from different disciplines work together to serve a common purpose and to help students make the connections between different disciplines or subject areas. Such interaction is in support of constructivist paradigm which allows for new knowledge construction and a deeper understanding of ideas than disciplinary study.

Making connections between different concepts is essential in interdisciplinary study. Here are some other benefits of studying in this way :

1. Students are highly motivated as they have a vested interest in pursuing topics that are interesting to them. As a result, the content is often rooted in life experiences, giving an authentic purpose for the learning and connecting it to a real world context. Consequently, the learning becomes meaningful, purposeful and deeper resulting in learning experiences that stay with the student for a lifetime.
2. Students cover topics in more depth because they are considering the many and varied perspectives from which a topic can be explored.
3. Critical thinking skills are used and developed as students look across disciplinary boundaries to consider other viewpoints and also begin to compare and contrast concepts across subject areas.
4. Students begin to consolidate learning by synthesising ideas from many perspectives and consider an alternative way of acquiring knowledge.
5. Exploring topics across a range of subject boundaries motivates students to pursue new knowledge in different subject areas.
6. Transferable skills of critical thinking, synthesis and research are developed and are applicable to future learning experiences.
7. Interdisciplinary knowledge and application of different disciplines can lead to greater creativity.
8. Worthwhile topics of research can fall in the 'spaces' between the traditional disciplines.

So, Interdisciplinary study allows for synthesis of ideas and the synthesis of

characteristics from many disciplines. At the same time, it addresses students' individual differences and helps to develop important, transferable skills. These skills, such as critical thinking, communication and analysis are important and continually developing at all stages of life. Educational systems are serving students best if they enable and encourage students to build their own interdisciplinary pathway. This approach is sure to foster a love of learning, ignite a spark of enthusiasm and address learning differences for students.

CRITICAL ANALYSIS OF EDUCATION AS A DISCIPLINE/AREA OF STUDY

- What is Discipline? Discuss Discipline as a major component of education.
OR
- Discuss education as an academic discipline.
OR
- Write an essay on 'Critical analysis of education as a discipline/area of study'.

Ans. Discipline is the required action by a teacher toward a student (or group of students), after the students' behaviour disrupts the ongoing educational activity or breaks a pre-established rule created by the teacher, the school administration or the general society. Discipline, guiding children's behaviour or setting all concerned with helping learn how to take care of the other people, and the world around them.

Discipline is an art that requires knowledge, skill, sensitivity, and self-confidence. Like any art, it is one that you will acquire through training and experience and it becomes easier with practice. Some people confuse discipline with classroom management. Discipline is one dimension of classroom management. Classroom management is a general term.

It is how a teacher organizes his/her students, time, space and materials, so students can learn in the proper environment. Classroom management refers to the organisation of a classroom. It includes the classroom environment, the layout of the desks and chairs, the flow of your lessons, space, time and materials. In any classroom, there is a wide range of behaviours. Children, as individuals, develop unique ways of responding to what goes around them. Most of these behaviours are appropriate and develop further when adults or peers show approval. Some behaviours are inappropriate which we call misbehaviour. Misbehaviour is any behaviour that is through, intent or thoughtlessness.

1. Interferes with teaching or learning.
2. Threatens or intimidates others.
3. Oversteps society's standards of moral, ethical, or legal behaviour.

So, there are three faces of discipline :

1. **Relationship** : Listening is a therapeutic process which is grounded in humanistic thinking.
 - (a) The teacher who favours relationship-listening philosophy believes that the student has the capability to change his own behaviour, he is the master of his destiny, and uses minimum power.
 - (b) Teacher thinks that he/she makes the student aware of his actions and gets him talk out his emotional concern, the student would stop misbehaving.
 - (c) The teacher's role is to provide the misbehaving student a supportive,

facilitating environment and establish a non-judgemental relationship.

2. **Confronting** : Contracting is an educational and counselling process which is grounded in social and developmental psychological theories.

- (a) The teacher who favours confronting-contracting philosophy believes that he has to confront the misbehaving student to stop his behaviour.
- (b) She/he gives the student the power to decide how he will change his behaviour and encourages the student to make a contract for behavioural change. Mutually acceptable solutions to conflicts are formulated.

3. **Rules and Consequences** is a controlling process which is grounded in experimental behaviourist psychologies.

- (a) The teacher who favours rules and consequences philosophy uses maximum power in the class.
- (b) He/she identifies the classroom rules and the behaviours he/she wants. He teaches these rules to the students and rewards positive behaviours acquired by the student.

Discipline is a Major Component of Education Because

1. If the teacher does not maintain the discipline in the classroom, the teaching and learning process cannot be accomplished. It is a first step in creating a learning environment.

2. As socialization agents, teachers have to teach their students which behaviours are expected in which situations. Hence, through their own actions and reactions, teachers transmit the message to children about their expectations for proper behaviour in particular situations.

To be successful in the classroom,

1. Teachers need a well planned, individual approach to discipline.
2. They must understand various theories of discipline and the assumptions on which they are based,
3. They must understand their own values and educational philosophy and
4. They must make an approach to discipline that is in harmony with their beliefs. If you believe in something and do something else, you will experience personal conflict and you also confuse your students.

Is Education an Academic Discipline?

According to Aristotle's Politics, a discipline is more specific than a field. A discipline does involve the study of something (biology is the study of living things, for example) but a discipline is also defined by (a) the methods it uses to study that thing, (b) the way it defines terms such as 'proof', 'evidence' and 'argument' and (c) a tradition of criticism as to whether certain claims count as knowledge. Importantly, this means that the same object of study can be researched in different disciplines. These distinctions can be seen very clearly between disciplines. Take, for example, the concept of 'proof'. For a mathematician, proof rests upon ideas such as necessity and tautology; for a chemist, proof requires a process of empirical observation and statistical induction; for a historian, proof rests on the interrogation of testimony. A chemist would not seek to prove something by finding out what someone said about it a hundred years ago any more than a historian would seek to explain the causes of the French Revolution by recreating it in a controlled experiment. In these ways there are clear distinctions in terms of how different disciplines set out in the pursuit of truth and knowledge.

So is 'education' a discipline or a field? According to Aristotle it is a field, because we would need to identify a set of methods, concepts and traditions of what counts as knowledge which are peculiar to it, and I do not think that these exist. Instead, the field of education has a long and rich history of using different disciplines in order to study education. The principal ones are psychology, sociology, philosophy and history.

But the following topical claims are made about education.

1. Education became more progressive in the 1970's.
2. Educational attainment depends on family background.
3. Working memory is limited to around seven items.
4. The primary aim of education is to create good citizens.

Each of these statements can be analysed, their meaning and truth teased out and their implications considered, but to do that we need a set of tools, and the tools we need are different in each case.

The first claim requires a historical assessment. History, as a discipline, seeks to make sense of the human past. A claim such as 'education became more progressive in the 1970's is a historical claim. The only way in which we can establish the truth of this claim is to use the tools of the historian. This means looking at the archival record and drawing on the available source material.

Sociology, like history, is another well-established discipline. It seeks to understand the nature of human society and the relationship between individual humans and the structures of that society. As a discipline, it has a set of techniques it uses to answer those questions, and is broad in the range of quantitative and qualitative tools it has available. To analyse the claim that educational attainment depends on family background we might, for example, conduct a series of case studies, or conduct an analysis of the correlation between free-school-meal status and GCSE attainment. Psychology is the study of the human mind. Learning particularly in a cognitive sense - is an important object of study for psychologists. The tools of cognitive psychology often involve creating experimental situations through social psychologists might make use of more natural settings, sharing some ground here with sociology.

Philosophy - as a discipline - concerns itself with the nature of reality (metaphysics) and knowledge of that reality (epistemology), and in some ways this makes it a meta discipline. Philosophy also encompasses ethics which broadly define as the study of whether and how one ought to act. Questions about the aims of education - for example - can be addressed using the tools of philosophy. One might an Aristotelian teleological argument or a utilitarian argument to address whether or not the aim of an education should be to produce good citizens.

These are the four disciplines which address most of the major educational questions. Some educational questions do of course call for an interdisciplinary approach : we might, for example, offer historical and sociological perspectives on the role of social class in pupil attainment, or we might gain insights into the strengths and weaknesses of 'assessment for learning' by deploying the tools of psychology and sociology. In some cases other disciplines also play a role in studying education : educational economics, for example, is a small but important field. Interdisciplinary work is however, logically prior to and predicted on the existence of disciplines. We cannot do interdisciplinary work unless we know what the different disciplines can and cannot do.

These distinctions are important because the disciplinary approach we adopt

determines the nature of the conclusions we are able to reach. History, for example, is very well placed as a discipline for determining what happened in the past, but is famously poor at making predictions about the future. Psychology in contrast, is much better placed to make predictions about how people will act in the future. In studying education as a phenomenon, we need to use the tools that are fit for purpose.

So this is about the quality of the debate. Disciplinary boundaries matter because certain disciplines allow us to reach some conclusions, but not others. Clarity as to the disciplinary nature of the claims we make - with their corresponding notions such as 'evidence' and 'proof' — can help us to express our arguments more fluently, and can enable us to have richer discussion about the fascinating and intricate thing we seek to study : education.

EDUCATION AS A SOCIALLY CONTRIVED SYSTEM INFLUENCED BY DIFFERENT FACTORS

What is social influence? Write factors/forces which influence the education system.

OR

Describe the forces affecting education in the Twenty-first Century.

OR

Write the social factors of learning and education.

Ans. Social influence occurs when one's emotions, opinions, or behavior are affected by others. Social influence takes many forms and can be seen in conformity, socialization, peer pressure, obedience, leadership and marketing.

A Psychologist Herbert Kelman identified three broad varieties of social influence.

1. Compliance is when people appear to agree with others, but actually keep their dissenting opinions private.
2. Identification is when people are influenced by someone who is liked and respected, such as a famous celebrity.
3. Internalization is when people accept a belief or behaviour and agree both publicly and privately.

Deutsch described two psychological needs that lead humans to conform to the expectations of others. These are : (1) Informational social influence, (2) Normative social influence.

Informational influence (or social proof) is an influence to accept information from another as evidence about reality. Informational influence comes into play when people are uncertain, either because stimuli are intrinsically ambiguous or because there is social disagreement.

Normative influence is an influence to conform to the positive expectations of others. Normative influence leads to public compliance, whereas informational influence leads to private acceptance.

Forces Affecting Education in the 21st Century

In addition, social changes, political forces, economic pressures, plus beliefs and values continue to develop in our country. As observers of current practices and new developments, however, we conclude that the following topics will likely to have a significant impact on future school objectives.

- Population Diversity**: The rapidly expanding mix of culture and ethnicity in our country will continue, and the changing demographics will affect our education.
- Globalization**: Interest and concerns about global issues will affect our country's schools and our attitudes toward education for years to come. In a space of two decades, much of Indian cultural life has been influenced through connections to worldwide products, information on different values and beliefs, and shifting job markets. Each year new electronic developments tie our economy and lifestyle to other parts of the world. To the new comparative education, procedures are helpful in using global perspectives on education, and this practice provides a logical extension for our need to extend educational partnerships to another level. In this way the internet and other electronic communication devices make the thousands of miles distance a trivial variable in worldwide communication.
- Technology**: Technological advances have always been viewed as support and enhancement for schools and other educational projects. During the 20th century, these advances were viewed much like new appliances that would make the home more efficient. Today, however, new technological developments (starting with networked personal computers) influence curriculum decisions, modes of instruction, and communication with families and communities. Audio-visual devices to enhance curriculum grew rapidly during last half of the 20th century. In the last decade, however, an explosion of technological equipment to enhance communication, entertainment, and retrieval of information has pushed young children's education and interest in very different direction. Media especially electronic media has become a preferred vehicle for receiving information and entertainment. This has huge implications for the projects we plan in schools, the nature of the curriculum, the models we use to evaluate our successes, and the equipment used in future classrooms. The emphasis on ability to use a keyboard at an early age, the skill in flipping from on TV screen or browser window to another, and the location of information in vast databases scattered over the planet all show that education outside a classroom will only increase. Linear paths, chronologies of events, and local schedules have far less importance in a high-tech-mediated environment. The new overarching frame of reference affects our work with children and all that we do with families and communities.
- Religious and Spiritual Variables**: India has greater interest in spiritual concerns and the expansion of religious practices in Local communities and abroad. Most teachers realize that studying about different religious practices can be a beneficial and stimulating project that will enhance a multicultural classroom. In elementary schools, religious dogma must remain outside any curriculum. The science curriculum in our secondary schools, however, has been affected in recent years on the issue of evolution vs. creationism and intelligent design. Statutes in several states and judicial decisions have come about as pressures from special interest

groups contested the secular orientation typical in American public schools. As different religious groups become more visible and expand their influence in public education, questions about religious beliefs and principles are likely to receive more study and adjudication.

Social Factors of Learning and Education

One of the most important tasks to an educational system is to authorize the young with the intellectual tools of the culture. Children are quite capable of incidental learning based on the natural mental functions. The acquisition of more advanced forms of the tool use, however it must be deliberate and must proceed in the full understanding of the power of the tool, of its generative potential and of the demands made on the use during the period of learning. The term intellectual tool is generally attributed to Vygotsky (Wertsch, 1985). He noted that nature contributes humans with certain elementary mental functions such as memory, attention and the capacity to make associations based on contiguity. We use these basic functions to make sense of our environment.

Socio cultural approaches to the process of learning are increasingly being applied by educationalists. Two principal agencies, the family and the school powerfully shape children's learning experiences. The influence of these two agencies is constrained by the wider social and cultural systems into which they are embedded.

Today the appearance of existing technology occurs most often first in the business sector. In the same way the role of the teacher is gradually changing from being the sole manager of the class to be the manager of the team work in the class. The developments in technology emerge very much from the marked forces whereas the educational systems are quite often conservative and slow to adapt to changes.

Change is not only refashioning media organisations, technologies, markets and resources; it is also transforming the social conditions of media audiences. According to Blumer and Gurevitch, what they find to be the most significant developments :

1. The breakdown of traditionally authoritative institutions that once anchored many people's identities and loyalties, such as political parties, churches, trade unions, local communities, allied to diminished defence to and increased scepticism about leaders and figures of authority.
2. A related weakening of traditional agencies of socialization and public order, such as families and schools.
3. The advance of individualistic, consumerist lifestyles, associated with expectations of rising income and educational levels.
4. Increased mobility not only geographical, occupational and social but also psychic, with more identities to assume and more cultural perspectives to meet.
5. A decline in moral certitude and consensus, provoking greater conflict over the boundaries between the permissible and forbidden.
6. The onset in the civic sphere of relatively intractable problems, such as those of economic management, safeguarding the environment, escalating demands of the costs of social provision and rising rate of crime, drug addiction and other manifestations and social breakdown.

Social Factors of Education

There are some accusations about the lack of connection between the school

environment and the real live experience. Formal education confronts children with many demands that are not a regular or frequent characteristic of their everyday experience outside the classroom. The practice of education confronts children with meaningful and necessary discontinuities in their intellectual, social and linguistic experiences. The technological developments in recent years have equipped teacher and instructional designers with more variety of tools to meet this new era, but the underlying theories of instructions must be an addition to the use of the tools.

Some future perspectives in educational technology are :

When reading through the literature concerning educational technology and instructional design the development in information technology and communication technology is of a great importance. According to Reigeluth the most important new directions for research in educational technology which include advancing the instructional prescriptions should be :

1. Facilitating understanding, generic skills application, and affective learning.
2. Utilizing the unique capabilities of new technologies,
3. Structuring and sequencing a course or curriculum,
4. Selecting mediational systems,
5. Designing instructional-management systems, and
6. Motivating learner,
7. Developing expert systems as job aids for, or even replacements for, instructional designers, and
8. Providing more help to the public schools, especially by applying systems thinking to the design of structural features that are more appropriate for the educational needs of an information society.

The arguments for why we should want to introduce technology into education is often that "we should want to prepare workers for the competitive global economy". Educational technology is almost everywhere discussed in terms of method, which is seen as having direct effects that are meaningful to national purposes or the formation of citizens able to contribute in specific ways to the society and the economy.

Today technologies allow the realisation of new styles of pedagogy. But, according to Salman and Perkins, technology is more than just the means of making a pedagogical dream come true; often the dream is influenced by what the technology affords, thus leading to the modification of the rationale. The easy access with technology to vast bodies of information, libraries, databases, archives, discussion groups and bulletin boards, seems to affect our conception of knowledge. For if all these informations are so accessible and easy to gather and manipulate by technology, it may well be that knowledge stored in students minds is less valid today than in the past. So, technology not only helps to translate the rationale into practice but has also triggered the development of that rationale.

- Explain the school subjects in the context of Indian society.
OR
- Describe the social foundation of curriculum at school level.
OR
- What are the social aspects considered while determining the school subjects?
OR
- What are the social forces affecting the school subjects?

Ans. There is a mutual and encompassing relationship between society and curriculum because the school exists within the societal context. Though schools are formal institutions that educate the people, there are other units of society that educate or influence the way people think, such as families and friends as well as communities. Since the society is dynamic, there are many developments which are difficult to cope with and to adjust to. But the schools are made to address and understand the changes not only in one's country but in the world as well.

Therefore, schools must be relevant by making its curriculum more innovative and interdisciplinary. A curriculum that can address the diversities of global learners, the explosion of knowledge through the internet, and the educational reforms and policies recommended or mandated by the United Nations.

However, it is also imperative that a country must have maintained a curriculum that reflects and preserves its culture and aspirations for national identity. No matter how far people go, it is the country's responsibility to ensure that the school serves its purpose of educating the citizens.

The four basic dimensions of any educational program are :

1. The goals or functions,
2. The content,
3. The structure, and
4. The methods used.

If an approach is to be effective, all four dimensions must be functionally integrated, and consistent with the underlying processes through which they interact to form a whole. That is, each dimension must be mutually reinforcing of each of the other dimensions if the total educational experience is to be cumulative and integrative for the student. To achieve such interrelatedness requires close attention to underlying processes of education, such as communication, cognition, and social interaction.

SKILLED INDIANS SKILLED INDIA

The Subject-Oriented Curriculum

The approach to curriculum design currently reflected in the schools is drawn from the classical western tradition of the categories of knowledge. In their most general form, these categories are represented by the major academic disciplines of the humanities, social sciences, natural sciences, mathematics, language, and aesthetics. In their more specific form, they are represented by the list of typical subjects taught in the schools today. At the elementary level, this includes subjects such as the language arts (reading, writing, spelling), arithmetic, science, social studies, and art.

At the secondary level, the categories become more specialized with subjects such as history, literature, algebra, biology.

In all of these subjects, the emphasis is on transmitting a predetermined body of knowledge or a particular set of skills from those who possess such knowledge or skills to those who do not. Thus, to a large extent in a subject-oriented curriculum, the learning process becomes subordinate to, or is determined by the nature of the content. Such an approach to curriculum presents at least two sets of problems in minority education, one in regard to content, and another in regard to process.

Social Consideration in Content Selection

Education of the child is a social undertaking and it is always carried in a social situation. The social forces in a society at any point of time determine the

objectives of education. The curriculum is designed to achieve those objectives. It is, therefore, necessary that while planning the curriculum, you must have a thorough knowledge of those social forces that have a bearing on the educational system of the society.

The basic aim of education is to preserve and transmit the culture, values, beliefs, ideals, traditions, aspiration and acceptable modes of behaviour in a society. A good curriculum ensures that the unique character and integrity of the society is preserved and the quality of life of social groups is also improved. The social forces influence the decision regarding what is to be taught, and how it is to be taught, what is to be added to or deleted from the existing curriculum to accommodate the change(s) in society is also decided by social forces.

Social forces exert their influence on curriculum through different organizations and groups of people operating at regional, national and local/community levels. These forces may be discussed under four categories : governmental forces, quasi-legal forces, professional organisations, and special interest groups operating in a community.

1. Governmental Forces : The government makes policies on education and its curriculum. Direct governmental controls are based on constitutional and statute laws. For example, in our country the Directive principles of the state policy under Article 45 direct the Government of India to make arrangements for universal elementary education which includes provision for physical facilities and engagement of teachers. It develops curriculum and text-books for the children. Similarly through Acts of Parliament in 1969 and 1986, the Government approved some new education policies which included components of vocational education, moral education, and extended general education up to class X. All those and several similar policy decisions affect curriculum planning. These decisions have led to reformulation of objectives of education and reconstruction of curriculum at different levels of education : primary, secondary and higher education.

The Constitution of India enshrines the principles of democracy and secularism which are reflected in the school curriculum and the text books based on them. Another means through which the government influences the school curriculum and in fact, most parts of the school education is the financial support extended by the central, state and local governments to educational enterprise in the country. Thus the government is in a position to enforce its rules, regulations and policies regarding curricular activities and experiences to be provided to the students.

2. Quasi-Legal Forces : These forces are not necessarily created by law. These may be created by voluntary organisations, professional bodies and autonomous institutions. These may include universities and colleges, parent-teacher associations (PTAs), text book writers, publishers, philanthropic organisations, mass-media, etc. For example, universities and colleges not only influence the curriculum through teacher education, but also play a significant role in determining the school curriculum. PTA's are the pressure groups through which community views on curriculum and text books are channelled to school, its board and curriculum planners. Big publishers greatly influence the type of content to be included in the text-books and the curriculum. Text books with sound psychological organisation, stimulating format, appropriate learning activities and relevant and powerful illustrations determine the content and the teaching procedures to be followed in schools. Curriculum makers sometimes pattern the course of study in particular fields according to these well organised text-books.

3. Professional Organizations : The professional organisations which influence the curriculum to a great extent include teachers and teacher educator's associations. For example, National Council of Teacher Education (NCTE) is empowered by the government of India to design curriculum for teacher education. The teachers organizations not only work for improving the welfare and working conditions of the teachers but also disseminate information about the profession, give suggestions for improving instruction and support research in education and in-service training of the teachers.

All these activities affect school curricula. While planning the curriculum, the curriculum planner has to consider the views and suggestions of educational organizations and their well-informed members, besides teacher's professional organizations. The curriculum planner considers the suggestions and concerns of other related professions. For example, for planning a good curriculum on commerce and accounting the opinions of the associations of professional accountants; company secretaries, experts etc., should be taken into account. Similarly views, research findings and experiences of subject societies should also be considered while planning the curriculum.

4. Special Interest Groups in the Community : In every society there are groups or organizations which promote a particular school of thought groups; cultural and religious organizations, civic groups and others representing various interests in the community. The curriculum planner should be interested in having an insight into the beliefs, aspirations and expectations of various groups in the society. The local education committee which represents the community, governs the schools and caters to the educational interest of the community, usually approves the course proposals and authorises the development of curriculum materials. Through these committees the aspirations, expectations and values of the interested groups are reflected in the curriculum, of course, within the broad frame of state and central education policy. These groups attempt to impress upon the curriculum planner.

INTERDISCIPLINARY NATURE OF EDUCATION; RELATIONSHIPS WITH DISCIPLINES/SUBJECTS SUCH AS PHILOSOPHY, PSYCHOLOGY, SOCIOLOGY, MANAGEMENT, ECONOMICS, ANTHROPOLOGY ETC.

- What is Interdisciplinary Education? Discuss its nature and relations with other disciplines.**

OR

- Define Interdisciplinary Education. Write the benefits of interdisciplinary study.**

OR

- What do you mean by Interdisciplinary Education? How you can say, it is an active learning or a new approach in education?**

Ans.

Meaning of Interdisciplinary Education

An educational approach in which two or more disciplines collaborate in the learning process with the goal of fostering interprofessional interactions that en-

hance the practice of each discipline. Such interdisciplinary education is based on mutual understanding and respect for the actual and potential contributions of the disciplines. Interdisciplinary education examines an issue from multiple perspectives, leading to a systematic effort to integrate the alternative perspectives into a unified or coherent framework of analysis.

Interdisciplinary instruction entails the use and integration of methods and analytical frameworks from more than one academic discipline to examine a theme, issue, question or topic. Interdisciplinary education makes use of disciplinary approaches to examine topics, but pushes beyond by : taking insights from a variety of relevant disciplines, synthesizing their contribution of understanding, and then integrating these ideas into a more complete, and hopefully coherent, framework of analysis.

Interdisciplinary teaching is different from multi or cross disciplinary teaching in that it requires the integration and synthesis of different perspectives rather than a simple consideration of multiple viewpoints. So, interdisciplinary education draws on multiple disciplines to acquire a deep and thorough understanding of complex issues and challenges students to synthesize what each of the disciplines offers before attempting to design efforts to resolve noted concerns.

Nature of Interdisciplinary Education

Interdisciplinary research combines components of two or more disciplines in the search or creation of new knowledge, operations, or artistic expressions; Interdisciplinary education merges components of two or more disciplines in a single program of instruction. This theory takes interdisciplinary knowledge research, or education as its main objects of study. It is an academic program or process seeking to synthesize broad perspectives, knowledge, skills, interconnections, and epistemology in an educational setting.

Interdisciplinary may itself become the focus of study, in a critique of institutionalized disciplines and ways of segmenting knowledge.

That's why interdisciplinary knowledge and research are important because :

1. Creativity often requires interdisciplinary knowledge.
2. Immigrants often make important contributions to their new field.
3. Disciplinarians often commit errors which can be best detected by people familiar with two or more disciplines.
4. Some worthwhile topics of research fall in the interstices among the traditional disciplines.
5. Many intellectual, social, and practical problems require interdisciplinary approaches.
6. Interdisciplinary knowledge and research serve to remind us of the unity of knowledge ideal.
7. Interdisciplinarians enjoy greater flexibility in their research.
8. More so than narrow disciplinarians, interdisciplinarians often treat themselves to the intellectual equivalent of travelling in new lands.
9. Interdisciplinarians may help breach communication gaps in the modern academy, thereby helping to mobilize its enormous intellectual resources in the cause of greater social rationality and justice.
10. By bridging fragmented disciplines, interdisciplinarians might play a role in the defence of academic freedom.

In this way, the term interdisciplinary is applied within education and train-

ing pedagogies to describe studies that use methods and insights of several established disciplines or traditional fields of study. It involves researchers, students, and teachers in the goals of connecting and integrating several academic schools of thought, professions, or technologies - alongwith their specific perspective - in the pursuit of a common task.

Relation with Other Disciplines

Interdisciplinary — a knowledge view and curriculum approach that consciously applies methodology and language from more than one discipline to examine a central theme, topic, issue, problem or work.

Interdisciplinary learning is one of many ways to learn over the course of a curriculum. This method can help bring students to a new awareness of the meaningful connections that exist among the disciplines. In order to define interdisciplinary learning thoroughly, we must understand that it is one of many approaches to designing and teaching a curriculum. For an interdisciplinary unit to be effective, it must be designed properly. A curriculum begins as a pre-formatted package of required elements and recommendations for learning for a specific grade level, semester or year.

A good curriculum expands on this guide becoming a blueprint for learning that an educator designs and plans in real time with the needs of real-world students in mind. Most curricula are firmly rooted in the discipline fields and have or three part structure, consisting in **equal measures** of :

1. **Content** : The topics, issues, themes or problems that become subjects of learning.
2. **Skills and Thinking Processes** : Developmentally appropriate benchmarks for students learning, such as critical thinking, reading comprehension, analysis, math skills, etc.
3. **Assessments** : Products that demonstrate skills and thinking processes, such as essays, productions, recitals, projects, note-taking and in-class participation etc.

A curriculum that is interdisciplinary presents content, skills and thinking processes, and assessments through exploring connections among the disciplines.

So, Today interdisciplinary learning has become a widely accepted tool for curriculum design. The concept now has enough of a history behind it that educators can move beyond preliminary sketches to design interdisciplinary units with confident, comprehensive, and bold strokes.

Relation with the Philosophy Subject

The philosophy department examines the efforts of past thinkers to understand the world and people's experience of it. The fundamental problems that philosophers address, help to guide and enhance our understanding of other subjects by placing emphasis on methods of reasoning and the way in which judgement are formed.

Since philosophical ideas have had an important influence on human endeavors of all kinds — including artistic, political and economic - students of the humanities should find their understanding of these topics deepened through an acquaintance with philosophy. A philosophic background also provides analytical skills and a breadth of perspective helpful to those called upon to make decisions about their own conduct and the welfare of others.

Psychology

Psychology is an academic and applied field involving the study of behaviour and mental processes. It attempts to understand the role of human behaviour plays in social dynamics while incorporating physiological and neurological processes into its conceptions of mental functioning. In reality psychology is a very broad field and most psychologists limit their interest to a small subsection of the discipline. Psychology has myriad specialties including social psychology, developmental psychology, cognitive psychology, mathematical psychology, etc. Psychology is considered a natural science with a social scientific application, social and occupational psychology are, generally speaking, purely social sciences.

Sociology

Sociology generally concerns itself with the social rules and processes that bind and separate people not only as individuals, but as members of associations, groups, communities and institutions and also a development of human social life. Sociology offers insights about the social world that extend beyond explanations that rely on individual personalities and behaviour. Sociology comprises a cluster of sub-disciplines that examine different dimensions of society. But today new sociological fields and sub-fields – such as network analysis and environmental sociology – continue to evolve; many of them are very cross-disciplinary in nature.

Sociologists use a diversity of research methods, including case studies, historical research, interviewing, social network analysis, developers, lawmakers, administrators etc. In such a way, social science heavily involved in many interdisciplinary areas such as :

1. **Cognitive Science** : The interdisciplinary scientific study of the mind and its processes, especially focusing on how information is represented, processed and transformed within living nervous systems and machines (such as computers).
2. **Cultural Studies** : An interdisciplinary field that seeks to understand how meaning is generated, disseminated, and produced from the social, political, and economic spheres within each culture.
3. **Information Science** : An interdisciplinary science primarily concerned with the collection, classification, storage, retrieval, and dissemination of information.
4. **Behavioural Science** : A term that encompasses all the disciplines that explore the activities of and interactions among organisms in the natural world.
5. **Environmental Studies** : An area that integrates social, humanistic, and natural science perspectives on the relation between humans and the natural environment.
6. **Library Science** : An interdisciplinary field that applies the practices, perspectives, and tools of management, information technology, education, and other areas to libraries, the collection, organization, preservation and dissemination of information resources; and the political economy of information.

Economics

Economics is a social science that seeks to analyze and describe the production, distribution, and consumption of wealth. Economics has two broad branches

: micro-economics, where the unit of analysis is the individual agent, such as a household or firm, and macroeconomics, where the unit of analysis is an economy as a whole. Another division of the subject distinguishes positive economics, which seeks to predict and explain economic phenomena, from normative economics, which orders choices and actions by some criterion; such orderings, necessarily involve subjective value judgements. Since the early part of the twentieth century, economics has focused largely on measurable quantities, employing both theoretical models and empirical analysis.

Economics thus involves the study of choices as they are affected by incentives and resources. This paradigm crucially assumes (1) that resources are scarce because they are not sufficient to satisfy all wants, and (2) that "economic value" is willingness to pay as revealed for instance by market (arms length) transactions.

Anthropology

It is a holistic discipline concerned with all humans, at all times, in all humanity's dimensions — a study of the totality of human existence. In pursuit of this holistic goal anthropology is methodologically diverse, using both qualitative and quantitative methods, such as first hand case studies of living cultures, careful excavations of material remains, and interpretations of both living and extinct linguistic practices. Anthropology consists of two major divisions : physical anthropology, which deals with the human physical form from the past to the present, and cultural anthropology (also known as social anthropology), which studies human culture in all its aspects. Since anthropology arose as a science in western societies that were complex and industrial, a major trend within anthropology has been a methodological drive to study peoples in societies with more simple social organization, sometimes called "primitive" in older anthropological literature.

Benefits of Interdisciplinary Study

Here are some benefits of studying in this way :

1. Interdisciplinary knowledge and application of different disciplines can lead to greater creativity.
2. Students begin to consolidate learning by synthesising ideas from many perspectives and consider an alternative way of acquiring knowledge.
3. Exploring topics across a range of subject boundaries motivates students to pursue new knowledge in different subject areas.
4. Worthwhile topics of research can fall in the 'spaces' between the traditional disciplines.
5. Transferable skills of critical thinking, synthesis and research are developed and are applicable to future learning experiences.
6. Critical thinking skills are used and developed as students look across disciplinary boundaries to consider over viewpoints and also begin to compare and contrast concepts across subject areas.
7. Students cover topics in more depth because they are considering the many and varied perspectives from which a topic can be explored.
8. Students are highly motivated as they have a vested interest in pursuing topics that are interesting to them. As a result, the content is often rooted in life experiences, giving an authentic purpose for the learning and connecting it to a real world context.

Consequently, the learning becomes meaningful, purposeful and deeper resulting in learning experiences that stay with the student for a lifetime.

CONNECTING KNOWLEDGE ACROSS DISCIPLINARY BOUNDARIES TO PROVIDE A BROAD FRAME WORK FOR INSIGHTFUL CONSTRUCTION OF KNOWLEDGE.

What is Constructivism? Describe the role of Interdisciplinary studies in the Liberal Arts.

OR

Explain Interdisciplinary studies across disciplinary boundaries. What are the benefits of Interdisciplinary study?

Ans. We know that constructivism is a theory about how people learn. This theory suggests that people create their own understanding and knowledge of the world through experiences and reflection on those experiences. It goes on to suggest that when students encounter something new, they have to integrate it with previous ideas and experiences by connecting the new knowledge to something already known. It may mean the students are studying something completely new and different. Sometimes it will result in the student rejecting the ideas completely.

Above all, the theory assumes that we are active creators of our own knowledge requiring students to ask questions, explore, and assess what is known or learned. Students engaging in interdisciplinary study therefore creating their own understanding and knowledge of the world through their study choices.

Interdisciplinary/cross-curricular teaching can increase students motivation for learning and their level of engagement. In contrast to learning skills in isolation, when students participate in interdisciplinary experiences they see the value of what they are learning and become more actively engaged. It also improves learning. Students learn more when they use the language arts skills to explore what they are learning, what about what they are learning and interact with their classmates, teachers and members of the community.

The Role of Interdisciplinary Studies in the Liberal Arts

Many people believe that current Liberal education prepares students for work, citizenship, and life during the next half century. It also seems evident that economy, polity, and society are embedded in an international content that has undergone significant changes in recent decades and promises to undergo even more dramatic transformations in the years ahead. Most public intellectuals as well as experts in future studies would agree that the increasingly global society of the first half of the twenty-first century will be characterized by increasing connectivity, diversity, scale, and rapidity of change. This is not a new notion. Furthermore we believe that interdisciplinary is the only game in town for understanding and addressing this complexity. As such, interdisciplinary studies are a necessary and important component of today's liberal arts education.

Interdisciplinary Studies Across Disciplinary Boundaries

The role of interdisciplinary studies in the liberal arts and across disciplinary boundaries, then is to help students see the real-world relevance of various academic disciplines, their comparative strengths and weaknesses, their power and their blind spots. Interdisciplinary study provides motivation for studying academic disciplines. Indeed, when general education programs are the primary curricular home for interdisciplinary studies, and when students are shown how interdisci-

plinary study contributes to real-world decision making, general education becomes the means for pulling together their education, placing their major in perspective, and highlighting the relevance of the liberal arts. Interdisciplinary studies represent a dialectical adjustment to the grand western experiment with reductionism - the intellectual strategy of dividing phenomena into constituent parts and studying those parts separately with the presumption that knowledge produced by narrow disciplinary specialists can and will be easily combined into an understanding of each phenomenon as a whole.

Interdisciplinary studies make it possible for us to build on the rationality and empiricism characterizing western thoughts. It is also helpful in continuing to provide disciplinary insights into the various sub-systems out of which our complex world is constructed. But as our society increasingly runs up against complex problems that disciplines are insufficient to illuminate, much less solve, we will rely more and more on interdisciplinary studies. The students we educate with interdisciplinary skills represent the future of western civilization. In short interdisciplinary study is not just an innovation in curriculum or pedagogy. It is the down of the other half of western civilization.

The Need for Interdisciplinary Studies

Our students will face challenges in the next several decades unlike those in the past. In general, small events on one part of the planet and in one sphere of human existence can now end up having large and relatively rapid effects on other parts of the planet and in other spheres of human existence. We read examples of these non-linear interconnections in the newspaper every day. They come not only from international relations and global environmental problems, but also from our daily lives at work, in our communities, and at home. Connections among diverse elements on different scales lead to changes so rapid that they are impossible to comprehend from only one perspective. Coping with this complexity will require a new way of understanding - one that does not rely on having only a single viewpoint.

Academic disciplines are necessary but not sufficient for understanding complex issues. Each discipline addresses only one aspect of the increasing complexity of human existence. That reductionist, divide - and - conquer strategy worked well when the spheres of human existence were relatively independent - when one could talk about the natural world separate from the human world; the economic sphere separate from the social and political spheres. Today, however, criticisms of the academy contain little indulgence because there is little faith that the academy has much to offer society. But at a more fundamental level, contemporary critics of the liberal arts are quite correct that academic disciplines by themselves are inadequate for understanding contemporary societal problems. They tend to misdiagnose the problem, however, accusing the academy of disinterest, disengagement, or incompetence, when they should blame us for not finding a way to integrate the insights of different disciplines into the complex issues confronting individuals and societies in the twenty-first century. While the critics are wrong about the source of the failure; they are correct that colleges are not doing enough to prepare faculty and students to bring disciplines to bear on complex issues and integrate their insights into a more comprehensive understanding of each issue. This process is called interdisciplinary studies. In a world characterized by complex problems, interdisciplinary turns out to be pragmatic, whereas disciplines become relevant largely through their contribution to interdisciplinary inquiry.

Integrating insights through the construction of a more Comprehensive Understanding

1. Identify conflicts in insights by using disciplines to illuminate each other's assumptions, or by looking for different concepts with common meanings or concepts with different meanings, through which those insights are expressed.
2. Evaluate assumptions and concepts in the context of a specific problem.
3. Resolve conflicts by working toward a common vocabulary and set of assumptions.
4. Create common ground.
5. Identify (non-linear) linkages between variables studied by different disciplines.
6. Construct a new understanding of the problem.
7. Produce a model (metaphor; theme) that captures the new understanding.
8. Test the understanding by attempting to solve the problem.

While these steps have heuristic value in identifying all the tasks that need to be completed by the interdisciplinarian and clarifying which parts of the process logically precede other parts of, they can also be misleading. For example, they give the impression that they are discrete when in fact they often overlap. They also make it appear that the process is monotonic when it is actually iterative, in that the completion of a step often provokes reexamination of an earlier step. Much as with the steps in the scientific process, in practice, researchers often jump ahead and then return to address the steps skipped over. Furthermore, the process can be initiated at any of several steps, though one must then go back and complete the earlier ones. Perhaps most misleading is the impression that integration is deferred until all contributing disciplines are mined for insights. In actuality, most interdisciplinarians tend to integrate as they go, forming an increasingly complete understanding of the topic as the insights of additional disciplines bring out more of its complexity. In this way, the interdisciplinarian is engaged in analytical "either/or" thinking when drawing on a discipline as well as synthetic "both/and" thinking in integrating the insights of different disciplines. Disciplinary insights can conflict as well as complement one another. So the interdisciplinarian must create common ground on which to construct a more comprehensive understanding of the complex issue than any single discipline can provide, utilizing techniques such as redefinition, extension, reorganization, and transformation. Interdisciplinarity is fully complementary to the disciplines, embracing them as it draws insights from them while transcending them as it integrates those insights into a more comprehensive understanding. In addition the interdisciplinarian must take on the task of identifying and characterizing the linkages between variables studied by different disciplines, since these connections are typically unexamined by any discipline.

In short the interdisciplinarian examines complex issues by taking insights the disciplines have to offer, pulling them together, reconciling them, ferreting out missing information, and then maximizing the contribution of the disciplines to an understanding of the problem. Conceptualizing this way, interdisciplinarity is the bridge between the academy and the real world, the means by which our students can be empowered to use the disciplines to address the complex world in which they live.

Chapter-4

Theoretical Perspective of Education

Define theoretical perspective. Explain theoretical perspectives in education.

Ans.

Meaning of Theoretical Perspective

Theoretical perspective is a way of looking at something and understanding is based upon a set of assumptions made by a scholar in a particular field. In academic study it is very important, as the assumptions that make up the theory help to maintain the discipline of a field.

Every field has a set of theoretical perspectives that are generally considered to be pertinent to the current state of research in that field. Theoretical perspective in sociology includes the conflict perspective, interactionist perspective and ecological perspective. In the field of psychology, examples of theoretical perspective include the behaviourist perspective and the psychoanalytic perspective.

There are many theoretical perspectives that maintain an important position across a number of definitions. The feminist theoretical perspective analyzes a particular event, society or product based upon a set of assumptions that takes into consideration the way that gender roles work in society.

In fact theories are organised systems of accepted knowledge that explain some aspect of the natural world. There are three major theoretical perspectives which have influenced our understanding of learning over the past century :

1. Behavioural perspective;
2. Cognitive perspective, including an information processing model;
3. Constructivist perspective.
1. **Behavioural Perspective :** Behaviourism is the theoretical perspective in which learning and behaviour are described and explained in terms of stimulus response relationships. The role of teacher in this perspective is to arrange external conditions. State objectives, guide student behaviour with cues, arrange feedback and reinforcements.
2. **Cognitive Perspective :** It is a change in knowledge stored in memory. The learning process is to attention encoding retrieval of information from memory. The role of teacher is to arrange conditions to support encoding and retrieval from memory. Organize information, link new information to old, use encoding retrieval techniques. The students role in it is ac-

tively process and attempt to encode information. Connect new learning to old. This technology helps students to organize information, link it to existing knowledge, and encode it.

3. **Constructivist Perspective** : A change is meaning constructed from experience. It is a continuous process of experience, reflection and meaning-making, often in groups. The role of teacher in this learning is to guide students' own learning. Create realistic and meaningful problems, manage group learning, model and guide. The students explore like a scientist, reflect, communicate, and collaborate in meaning-making. The technology plays is to facilitate collaboration, and provide complex and realistic problem-solving environments.

Theoretical Perspectives Concerning Education

The three social theoretical perspectives concerning education are functionalism, conflict theory, and the Interpretivist Approach. The theme of education and societal inequality : Race, Gender, Class and Ethnicity offers an excellent opportunity to compare the three theoretical perspectives. We can compare the three social theoretical perspectives of education by looking at five dimensions of multicultural education which typology provides.

In education when students develop more democratic attitudes, values and behaviours they become more socialized and are better able "to adapt to economic, political and social institutions of the society".

Multicultural education typology demonstrates the conflict theory approach. Teachers in the equity pedagogy dimensions attempt to use teaching strategies that "facilitate the academic achievement of students from diverse, racial, ethnic, and social-class groups-to help students who are members of low status population groups to increase their academic achievement".

According to social scientists, "they developed the culture of poverty concept to describe experiences of low income populations and in education this concept became known as cultural deprivation or the disadvantaged." In many ways the equity pedagogy dimension is quite similar to the empowering school dimensions. The idea of the empowering school culture dimension, is the process of restructuring the culture and organization of the school so that students from diverse racial, ethnic, and social-class groups will experience educational equality and cultural empowerment. To achieve an empowering school culture for minority students and students from low social economic status backgrounds, schools must 'restructure' their culture and organization.

The interpretivist perspective can be found in both the content integration and the knowledge construction. Content integration deals with the extent to which teachers use examples, data, and information from a variety of cultures and groups to illustrate key concepts, principles, generalizations, and theories in their subject area or discipline. Similarly, with the knowledge construction dimension, "teachers help students to understand how knowledge is created and how it is influenced by the racial, ethnic, and social-class positions of individuals and groups." So, the social forces at work are shared meanings and interpreting individuals who interact in particular social contexts."

According to Spindler, "The interaction between teacher and student is characterized by an authoritarian rigidity, for example, students rise from their desks as the teacher enters the room as a sign of respect and students are not expected to ask

questions of the material but rather are to give the "correct" answer when asked."

It's important for all educators (both teachers and administrators), researchers, and policy makers to have a "grasp" or knowledge of the three social theoretical perspectives concerning education if they are to have a good understanding of the sociology of education.

In this way, theories are an essential part of the framework used to organize specific social phenomena within the social sciences. The major theoretical perspectives in sociology include structural-functional, social conflict, feminism and symbolic interactionism. Theories help teachers/trainers/e-learning designers to think like educators, help students to improve their learning ability, and also help software developers in developing domain competence and readiness.

SCHOOL EDUCATION - CONTEMPORARY EDUCATION

- Explain the issues and Challenges of Indian Education.
OR
- Express your views on Indian Education and its Contemporary issues.
OR
- What can we do to improve the Indian education system?
OR
- What is school education? Describe contemporary challenges in school education.

[June, 2018]

Ans. Today, every country of the world is trying to be developed in every possible way. Every country whether it is a developed or developing, they both want to progress in a scientific way. They want to reach on the top of developments. But all countries know it better that whether the problem of poverty, or corruption cannot be removing the problem of illiteracy.

All our leaders and educators are trying to get over this problem but, find themselves unable to do so. And this all is happening due to our sick and insufficient education policies. And when our policies fail, we curse to others like population is washing our efforts and corruption has eaten up our system etc... In this context when we talk about education and its contemporary issues. First we should discuss that what challenges and issues do we have in contemporary world and before this, we should discuss that what are the aims and objectives of our education and then we should search the reason of it.

The first aim of our education was all round development of a child, but it is quite apparent that all round development is like a day dream because the current system is not developing even a single ability in the child.

Father of the Nation, Mahatma Gandhi once said, "By education I mean all round drawing out of the best in child and man, body, mind and spirit." Our national poet, great philosopher and follower of naturalistic approach of education somewhere wrote that, the highest education is that which does not merely give us information but makes our life in harmony with all existence." The following are the main issues of contemporary Indian education :

1. **Unsatisfaction of Youth** : The foremost issue is the unsatisfaction of youth. Teachers are unable to satisfy the youth by their knowledge and methods of teaching, their knowledge level and education system is not providing the satisfaction and due to this, the youth stands against the teachers and system.

2. **Discipline** : The second reason is discipline in schools and colleges. This reason is given of our so called leaders and social contractors who institutes the youth time for their own benefits.
3. **Unemployment** : Third can be the problem of unemployment. Some of our educators think that now this problem is an issue for education system but when a youth looks his or her brother or sister unemployed even after getting bachelor or post graduate degree, they are unemployed, this give the birth to a revolt.
4. **Poverty** can be next issue or a challenge to which our education system is facing. Nowadays the cost of getting education is very high so poor of our society find themselves lost in getting education.
5. **Political Unwillingness** : It is also a great challenge for our education system. Politicians think that they got five years to fulfill their wishes. Matters of education are just kept in pending.
6. **Casteism** : Casteism creates a wall between lower class and upper class. Once we see a teacher taking fee from the students (you will say what is surprising in this in most of the schools teacher takes fee from the students). But when a student came to give fee, the teacher asked to put the amount on the table. But reality was different, that boy belonged to SC category and that was untouchable for the teacher.... This happens in our schools and in colleges.
7. **Dearness** : It is another challenge for the education system. Fee of colleges and schools is rising day by day with public schools raising their fee structure in every session but the wages of laboratory is not increasing at the same speed. So poor people find themselves unable in admitting their children in those schools. And government schools do not compete with the public schools or CBSE schools.
8. **Corruption** : The next challenge is our corruption which has become the right of all government officers and whole system. In many schools, it is found that the fund which was sending to the school disappeared on the way.
9. **Privatization** : Privatization of education is great issue. Some learned people say that government officials take higher salaries but not work according to that. But in private institutes teachers remain in very critical conditions which is not good for the education system.
10. **Unawareness** : Unawareness of teachers about the methods and techniques of teaching. Even they are not interested in these. Teaching is the profession in which a teacher needs to polish his/her knowledge day by day. And because it is the profession daily updating of methods and techniques is compulsory. I think this is the demand of the profession but our teachers are so rigid that they don't want to change themselves.
11. **Character of Teachers** : Our teacher's character is going downwards. A teacher is the only person who can change the direction of the society. He is the person who is the center point of any education system. This influences much our society than any other part of the society. This affects much our education than all the above points.

Challenges of Present Educational System in India

Education is the parameter that separates a man from the beast. Education uplifts

the standards, promotes co-operation and maintains harmony in the society. The cognizance it instills makes every individual an intellectual citizen of the nation. Country expects its growth and development on the rock stone called 'Education'.

It is possible only if the education system is fair and good enough and that too targeted in a right direction. Though education system in India is one of the finest in the world but yet there are certain impediments that still hinders with its move towards perfection. Filtering our education system of these challenges will definitely refine it. Major challenges faced by the present education system of India are discussed as follows :

1. **Inefficiency to Extract Students' Interest** : A major area where the present Indian education system is lacking is that education here has taken the form of rat race. Each and every student has its own interest in one or the other field. Teachers fail to extract the students' interests where they can excel, so that they can be provided better opportunities and guidance in the area of their interest. Instead they are forced to mug up the mandatory subjects and their perspective is made just limited to professions like doctors, engineers, lawyers etcetera. India education is thus expanding in quantity not in quality. The character of Indian education system has restrained and restricted Indian young right from the school age and continues that way with college and university stage. This harms the potential of human mind for constructing and creating new knowledge. In nutshell, we may say that the actual talent of the students remain concealed and is never let to ooze out.
2. **Engineering, Medical and other Colleges—All Money Earning Shops** : Higher education in the current scenario in India is in an extreme chaos. Entry of private entrepreneur into the education system has led to the deterioration of the quality of higher education. Mushrooming engineering and management colleges, degree and post-graduate colleges, dental and other colleges and last but not the least the deemed universities, with some notable exceptions, have largely become more business entities dispensing very poor quality education. These modern shops of higher education are running their courses on temporary and under qualified staff without proper laboratories and libraries. The sole concern of these self-financing institutions is profit maximization. Fee structure of majority of professional institutions is so cumbersome that the word of an ordinary person has no place in these institutions.
3. **Multi-Regulatory System** : Currently the regulatory framework of higher education in India is under multiple statutory bodies like, University Grant Commission (UGC), All India Council of Technical Education (AICTE), Medical Council of India (MCI), and National Council of Teacher Education (NCTE) etcetera. The presence of such a multi regulatory system has created many hurdles in the growth of our education system. Various colleges get approved and affiliated easily even if they do not meet the required standards completely. Bulk of Deemed universities exist in India which do not deserve this status at all. This is all because of Lack of coordination and corruption in these multiregulatory bodies. Often two regulatory bodies can be found on loggerheads and fighting legal cases against each other. Various stages of regulations, such as approval, recognition, affiliation and accreditation have created avenues for bu-

reaucratic intervention, real tapism and last but not least the corruption.

4. **Grading System Initiated by CBSE — Not a Good Practice :** Recently central board of secondary education (CBSE) initiated a move towards the grading system for matriculation classes and exempting the students from giving the goose bumps causing board exams. Though it may have relieved Lakhs of students from the burden of boards but it is an intelligent step towards the education development.

In this scheme, E grade will be given to the student who has scored below 33% marks. Such a case in case of board exams used to fail a student (33% in two subjects). But in grading system, the fellow will be allowed to sit in XIth standard and given a chance to improve. Such a practice will make the students to take the matriculation exams more lightly. The dedication and sincerity that the students used to have earlier will vanish with the implementation of this grading system.

The hidden motive behind this schema of CBSE is not to relieve the students but to transform all schools into CBSE schools. Students studying in various other boards like ICSE, state board etcetera will definitely find grading system better and Less burdened and will tempt them to drift to CBSE schools. As such the ICSE and other schools will become deficit in students and they will ultimately transform to CBSE schools.

What are the efforts being made at National Levels to achieve the goal of Education for all?

OR

What do we need to change about the Indian Education System?

OR

Explain views/thoughts on improving the education system.

Ans. Education has been a problem in our country and lack of it has been blamed for all sorts of evil for hundreds of years. Even Rabindranath Tagore wrote lengthy articles about how Indian education system needs to change. Now students study only to score marks in exams. People see education as the means of climbing the social and economic ladder. If the education system is failing, then it is certainly not due to lack of demand for good education, or because a market for education does not exist.

Education system in India is failing because of more intrinsic reasons. There are systemic faults that do not let our demand for good education translate into a great market place with excellent education services. Now the question is that, what should change in Indian education system? What needs to be fixed at the earliest?

1. **Focus on Skill based Education :** Our education system is geared towards teaching and testing knowledge at every level as opposed to teaching skills. If we teach a man a skill, we enable him for a life time. Knowledge is largely forgotten after the semester exam is over. Still, year after year Indian students focus on cramming information. The best crammers are rewarded by the system. This is one of the fundamental flaws of our education system.

2. **Reward Creativity Original Thinking Research and Innovation :** Our education system rarely rewards what deserves highest academic accolades. Deviance is discouraged. Risk taking is mocked. Our testing and marking systems need to be built to recognize original contributions, in

form of creativity, problem solving, valuable original research and innovation. If we could do this successfully, Indian education system would have changed over night. Memorising is no learning; the biggest flaw in our education system is perhaps that it incentivizes memorizing above originality.

3. **Character Building Aimed Education :** Character building is considered one of the most important aim of education by a number of educationists and scholars. Before entering into any profession, it is essential for every individual to have a good character. He should have such a character that people can trust, love and respect him. As man with good moral character is able to achieve success in all fields of life.

4. **Re-Define the Purpose of the Education System :** Our education system geared towards generating babus and pen-pushers under the newly acquired skin of modernity. We may have the most number of engineering graduates in the world, but that certainly has not translated into much technological innovation here. Rather, we are busy running the call centres for the rest of the world—that is where our engineering skills end. The goal of our new education system should be to create entrepreneurs, innovators, artists, scientists, thinkers, and writers who can establish the foundation of a knowledge based economy rather than the low-quality service provider nation that we are turning into.

5. **Effective Deregulation :** Until today, an institute of higher education in India must be operating on a not-for profit basis. This is discouraging for entrepreneurs and innovators who could have worked in these spaces. On the other hand, many people are using education institutions to hide their black money, and often earning a hefty income from education business through clever structuring and therefore by passing the rule with respect to not earning profit from recognized educational institutions. As a matter of fact, private equity companies have been investing in some education service provider companies which in turn provide services to not-for-profit educational institutions and earn enviable profits. Sometimes these institutes are so costly that they are outside the reach of most Indian students. There is an urgent need for effective de-regulation of Indian education sector so that there is infusion of sufficient capital and those who provide or create extraordinary educational products or services are adequately rewarded.

6. **Alternate Education Must be Promoted :** There is no need to teach anyone for more than 3 hours a day till the secondary school. Therefore, the available education infrastructure can be used more effectively through the shift system. Three normal shifts can be run between 0700-1000, 1100-1400 and 1500-1800 hours. An hour gap in between for the children to leave the school and the next set to walk in. In the late nights - from 1900-2200, the facility can be used to provide education to old and unlettered. Facilities such as the building, furniture, library, computer, centre, laboratories and play fields can be used very efficiently in this manner.

7. **Compulsory Free Education should be Made Available till Class XII :** The state and central governments should completely absorb the cost of providing free education till 12th std to every child, irrespective of caste, religion and economic status. This should cover not just school fees, but

also free books, food if necessary, uniform clothing and even a place to stay if the parents cannot afford that to their children. Those with money can always opt for their own children. Alternately, some rich may decide to send their children to the govt. schools.

8. Make Reservation Irrelevant : We have reservation in education today because education is not available universally. Education has to be rationed. This is not a long-term solution. If we want to emerge a country build on a knowledge economy, driven by highly educated people - we need to make good education so universally available that reservation will lose its meaning.

There is no reservation in online education - because it scales. Today universities world wide are taking various courses online, and today we can easily attend a live class taught by a top professor of top university on line if you want, no-matter which country you belong to. This is the future, this is the easy way to beat reservation and make it inconsequential.

9. Make the Curriculum Dynamic not Dogmatic : The curriculum or the syllabus for students in our country in higher education is outdated in most cases. It is stale, dogmatic and teaches things that the world have moved on with. To infuse dynamism, you need the curriculum to be progressive in nature. The spirit of curriculum should be projects driven, not exams driven and it should evolve not stay stagnated. The projects should have independent people who judge them not just faculty in place. The students should also be given the option to switch over to other streams if they feel so or if they justify the basic criteria.

10. Make the Teachers Feel Worthy, Pay them More : The academic curriculum board, in most cases is filled with people above their 60s and 70s. With all due respect to them, we need a bunch of younger professors in there to have that mix of experience and youth in the system. The younger ones would be more in sync, more in line with the technological changes and the new age needs of the students in their years to come. And also pay them more.

Some latest or new improvements should be taken to drive socio-economic prosperity for the country. As the government prepares for such measures, it is important to note that for any growth model to be successful we need an educated and skilled population.

1. Our education system currently suffers from an apparent 'Licence Raj' that restricts entry and operation of private players.

2. It is important not only to invest more in education but to do so more strategically. Central government should invest more resources in teacher education and development, principal training, ICT in education and assessments.

3. Third, improve quality standards through nationwide assessments. Assessments need to be at the care of any planning exercise for improving India's education system. The government should introduce statewide learning assessments that are undertaken at regular periods during a child's school journey, which can also contribute to remediation and improvement in teaching.

4. Fourth, equip school principals to become efficient school leaders. Great

leaders make great institutions, in every sphere.

5. Fifth, improve teacher quality for better learning outcomes. It is unfortunate that teaching today does not attract the best talent. We need public awareness campaigns in India that are able to effectively project teaching as a rewarding and meaningful profession. Centres of excellence need to be created for teacher education in prestigious universities across India.

LINKAGE BETWEEN EDUCATION AND OTHER DEVELOPMENT SECTORS

- What is the role of education in national development?
OR
- Explain education is a vital investment for human and economic development.

Ans. Education is a vital investment for human and economic development and is influenced by the environment within which it exists. Changes in technology, labour market patterns and general global environment, all require policy responses. Traditions, culture and faith all reflect upon the education system and at the same time are also affected by them. The element of continuity and change remains perpetual and it is upto the society to determine its pace and direction. We are living in an inquiring and innovation-oriented society. The demand of twenty first century is novelty, creativity and integration of knowledge at global level, research, critical and analytical thoughts. Rapidly social changes are creating uncertainty and complexity in the society. To prepare the children and youth to cope with the present situation needs to develop analytical and critical thinking, skill and attitude that would make them more flexible and innovative to deal with uncertainty and crises at national and global level. The greatest need of the hour is to re-design curriculum, textbooks, teaching methodology and children's literature, formal and non-formal educational systems. It has been demonstrated by researcher that active learning (questioning and investigate the nature of topic) develop creativity and stimulate for learning.

Curriculum plays crucial role in national integration and harmony. Curriculum role as observed in the National Education Policy (1979) should aim enable the learners to learn knowledge, develop conceptual and intellectual skills attitudes, values and aptitudes conductive to the all round development of their personality and proportionate with the societal, economic and environmental realities at national and international level.

Whitehead says, "Culture is the activity of thought, and receptiveness to beauty and humane feeling." A child is a human being in embryo, a man to be and we are responsible to the future for him. It is considered that a child learns 90 percent of his personality by his nurturing. It is perhaps easier to educate a child in beginning than reeducate him when he has already formed. Therefore, books for children are not simply a source of entertainment rather inculcate intelligence and values.

Textbooks are the most widely used as a teaching tool which represent our national culture. Text books reveal our national values, culture, and ideology of a nation. A good text book can be a "teacher in print", and sometime even superior to an average teacher. In fact they are influences towards national integration by sharing common national culture.

Questioning methodology is a powerful tool to build analytical and critical

skills in pupils. In the world of knowledge, the emphasis has not to be merely mastery to extent the knowledge but on the acquisitions of capacity to think and analyze facts logically and conclude its own.

Teachers must adopt such teaching methodology by which students must learn how to discard old ideas and replace them with modifying ideas.

According to Toffler, "Learn how to learn". Schools of the future will be designed not only for "learning" but for "thinking". More and more insistently, today's schools and colleges are being asked to produce men and women who can think; who can make new scientific discoveries, who can find more adequate solutions to impelling world problems, who cannot be brain washed, men and women who can adapt to change and maintain sanity in this age of acceleration. This is a creative challenge to education.

The Importance of Education to National Development

Education is the best legacy a country can give to her citizens. Education improves the development of any society hence, the need for the educated ones to occupy significant positions in order to improve the society.

Therefore, schools at various levels are expected to educate future leaders and develop the high level technical capacities needed for economic growth and development. Education is important for a country to grow, whether it is economically or socially, education plays a vital role in the growth of these two important factors.

Here are some important ways in which education helps in a country's progress.

- 1. Education Helps People become better Citizens :** Educated people are aware of the socio-economic scenario of the country and can help in the progress of the country. Whether it is a simple thing like using water sparingly or taking a bus to work instead of using the bike or car in order to save fuel, the educated mass somehow or the other knows how to contribute towards the country's well-being. People who aren't educated don't have clues about these facts as they haven't been in a learning environment.
- 2. Education Shows the Importance of Voting :** Education helps to decide whom to vote in order to make a difference in the economy of a country positively. Being educated helps in deciding why to vote for a particular party over the other. Uneducated people are unaware of the importance of choosing the right people to vote for. Hence being educated shows us the importance of voting.
- 3. Education Helps in Getting Jobs :** It goes without saying that unless a person is educated, he or she cannot get a worthwhile job. Unemployment is a serious obstacle in the development and progress in a country's economic status, thus posing a hindrance to the growth of the nation. The economic status of many countries in the world is pathetic, due to the lack of educated people who do not possess adequate skills and thus are unemployed.
- 4. Education Helps Single Mothers :** Single mothers who aren't educated cannot get a decent job to support their children which is a necessity in their situations. Being educated can help a single mom find jobs as well as make them aware of certain schemes such as child support benefits and ways to reach for such benefits like a csa phone number child support agency to contact the agencies that offer such help. This can help

them in better upbringing of their children, thus helping them to become responsible citizens of the country.

Importance of Education in Economic Development

Education is considered to have a strong correlation and social and economic development. In contemporary times when the focus is on the 'Knowledge economy', the role of education becomes all the more important in the development of human capital.

After all, a society of literate and skilled citizens has more chances of development at the economic and social levels.

Education can reduce poverty and social injustice by providing the underprivileged resources and opportunities for upward social mobility and social inclusion. Yet, until the National Education Policy (NEP) 2009 was unveiled, the budgetary allocation for education in Africa was on the decline. The lack of political commitment of the state has resulted in multiple educational systems which are inherently discriminatory and biased in nature. A large number of students are unable to attend schools. Countries like Ethiopia, Ghana, Niger, India, and Mali are placed in relatively better positions.

Such a large number of students outside school means that they are deprived of the opportunity to learn and acquire skills for playing a meaningful role in society. Social exclusion is a great loss at the individual and societal levels. Most of these out of school children experience poverty and unemployment and some get involved in criminal activities as well. Constitutionally, the provision of basic education to citizens is the state's responsibility. The state needs to analyse the reasons behind the number of out-of-school. They come from poor families and cannot afford the luxury of education despite their desire for it.

The real issue of educational apartheid comes to surface only after joining a school. Enrolling in a school does not ensure the provision of quality education. There is one question which is central to quality : what kind of school is it? The answer to this question may include the state of building, faculty, management, curriculum, textbooks, examination system and medium of instruction as well as the socio-economic background of the children.

The reference to socio-economic background is crucial as schools—like social classes—are stratified in terms of social status. So, social exclusion is not only at the access level but also at the quality level. The widening difference between private and public schools is responsible for the gaping chasm between resources and opportunities given to the poor and the rich. Children from elite schools have enhanced chances of employment and social integration whereas children from public schools, no matter how bright they are disadvantaged in terms of getting exposure to quality education. The famous slogan 'education for all' needs to be revisited. Is it sufficient to enrol every child in school? Thus the slogan needs to focus on 'quality education for all'. It is the quality aspect which is missing in disadvantaged schools. Instead of taking some constructive measures to improve the conditions the state is taking the easy route of offering private schools as an alternative.

Government officials publicly give statements that public schools have failed and the only alternative left is private schools. Education has failed miserably to reduce poverty schools. Education has failed miserably to reduce poverty gaps, social injustice and oppression. The education policy suggests that "the educational system of India is accused of strengthening the existing inequitable social structure

as very few people from public-sector educational institutions could move up the ladder of social mobility."

So, the education policy should have given a clear and concrete blueprint to combat social exclusion, in-equality and social injustice. The existing discriminatory educational systems are not only perpetuating the socio-economic gaps between the haves and have-nots, they are also responsible for further widening these gaps.

Discuss the role of education as technological empowerment. What are the advantages and limitations of technological development?

Ans.

Technological Empowerment

The meaning of empowerment is related to the process of increasing one's power or capacity to perform any task assigned to him. This capacity to perform a particular task is called empowerment. Now the question arises how one can achieve empowerment. It is done by the individual or it is facilitated by some external agency. Here it suggests that there must be some external or a helping instrument or tool to facilitate the process of empowerment. When technology is accepted as an external agency which has the power to increase one's capacity to perform a particular task is termed as technological empowerment. There, it can be said that technological empowerment is the process where a teacher, as a professional or an administrator is aided by the tools of technology. It enables him to enhance his capacity for performing a task efficiently. Empowerment is also related to one's own practice with such techniques and developing a skill or competency.

Technology in Education

As the advancement of knowledge, research ideas, innovations in sciences has taken place, the application in developing new techniques and technologies have taken place in all the fields of human activities. It has empowered man of new skills and competencies also brought a tremendous new directions all over the globe.

There have been many developments in the field of education, teaching, learning, extension and training of the teachers, administrators and even policy makers. Revolutionary changes are visible and still are on move. It shows that man has tremendous capacity to think, research and apply knowledge in making his life more comfortable and adjustable with the changing environment. Modern technology has played an important role in education. This trend can be observed due to following technologies :

1. Printing technology and press made teaching, learning effective, facilitative and enjoyable.
2. Introduction of audio-visual aids facilitate the teaching-learning process. It has made education very effective, concrete and impressive.
3. Teacher's communication of abstract concepts and ideas has become clear to the students.
4. Computer-based technology.
5. Internet technology based teaching and learning including online learning and training.
6. Wire and wireless based technology including telephone and mobile learning.

Application of Technology in Education

Education is a systematic process of changing one's behaviour. This process today has been involved by a number of techniques and technologies, which are labelled as 'software' and 'hardware'. The software is the material which is recorded in digital form. It is being used by the teachers and students today. The equipment used in recording on CD, pen drive and floppy are called hardware.

In addition to these techniques, modes of instruction, interaction and communication used by the teachers in the classroom have changed. Some of them are listed as under :

1. Application of theories of learning like classical & operant conditioning.
2. Application of systematic approach to teaching, learning, examination and management. There is inter-relation and inter-dependence between teaching, curriculum, methods of teaching, and evaluation.
3. Application of research based techniques in evaluation, type of questions, assignment, projects, question banks, etc.
4. Application of techniques of behaviour modification like modelling/social modelling, counselling, and feedback.
5. Planning and designing curricular material, instructional planning and real learning.

Thus, we see that new technology has impressed a lot to education.

Technological Empowerment in Relation to Techniques of Instruction

Modern technologies, especially hardware enabled all teachers, students, administrators and policy-makers. It made education with a new vision in 21st century.

Now we can see the following changes in Educational field :

1. Developing of learning based instructional material easy to form, formation of concept and scope for analytical and critical thinking of learners.
2. Mobile learning through 3G/4G technology.
3. Use of new technology of teaching like OHP, LCD, Computer with other networking to cover student population.
4. Computer based learning like on-line, e-mails etc.
5. Satellite-based instruction in schools.

"Education is a vital force behind social change". In the light of this statement, discuss the role of education in social change.

OR

What is the impact of education on social change? Discuss by taking examples from Indian Society.

Ans.

Education and Social Change

Education is regarded as a powerful instrument of social change. It is education that can bring about the necessary change in social, cultural and mental mindset of the people. Education spreads knowledge among the people and also exercises social control; propagate culture and encourage social progress. It also empowers people to accept social change of varied nature. Education prepares children for change in society. It encourages critical attitudes among them.

The aim of education, curriculum, methods of teaching and role of the teacher can be discussed in context of social change as given below :

1. **Aim of Education :** The Education Commission (1964-66) has suggested the following regarding bringing about social change in the Indian Society.
 - (i) Education should aim at increasing productivity.
 - (ii) Inculcation of socio, moral and spiritual values.
 - (iii) Vocationalisation of secondary education.
 - (iv) Development of feeling of national integration.
 - (v) Acceleration of the process of modernisation.
 - (vi) Development of feeling and Social integration.
2. **Curriculum and Social Change :** The curriculum should be child-centred, community centred, integrated, correlated and flexible. The subjects and activities like science, social subjects, work experiences, moral education, adult education, women education etc. should be included in the curriculum. The study of all these subjects would go a long way in preparing the youth for social change.
3. **Role of the Teacher :** The teacher can play a significant role in the process of social change. It is he who can inculcate proper attitudes and values in students. He should keep in mind that education and society are related to each other and he is an effective agent of social change. He should develop leadership qualities among students.
4. **Discipline :** For social change, emphasis should be laid on free discipline, self discipline. Discipline should not be based on fear. Rather it should be infused through self-control, patience and inner power of the self.
5. **Methods of Teaching :** Methods of teaching should be based on democratic, psychological and scientific principles. Methods like Project Method, Discussion Method, Demonstration Method, Seminars, Symposium should be adopted effectively.

Role of Education in Social Change

The role of education in the field of social change is as follows :

1. **Promoting Capacity to Accept Social Change :** Education prepares the people to welcome and accept social change easily. It propagates in the society both the materialistic and non-materialistic techniques.
2. **Education Perpetuates Eternal Values :** A society has some eternal values. These values stabilise and consolidate society. Education protects these values. It also preserves and promotes the moral and spiritual values on which the society depends heavily.
3. **Education Analyses the Social Change :** Social change is analysed by education. Education also helps the individual to distinguish between right and wrong. Thus, whatever is good and right is accepted in social change and whatever is not desirable is not allowed to happen.
4. **Aids in Bringing New Social Change :** Education helps in bringing about new social change, as it removes social evils, blind customs and traditions. These social changes will prove very useful and beneficial for society.
5. **New Ideas and Researches :** New ideas and research are possible through the process of education. Educated people add to the knowledge. Then there is possibility of better type of social change.
6. **Education helps in Skill Development :** Education provides training in professional and vocational skills. Thus it enables students to become

self-sufficient and self-reliant and to uplift their social and economic status.

7. **Education Removes Obstacles in the way of Social Change :** Education helps in removing the obstacles in the way of social changes. For example, Govt. in India wants to bring social change by implementing family planning. It is only through education that the people can be prepared not to resist the family planning programme. In India, laws have been framed regarding issues as divorce, widow marriage, equality of untouchables etc. but permanent changes can never be brought about by mere laws. Education can mobilize the opinions of the people against social evils and help in bringing about social change.
8. **Education as a Medium to Propagate Social Change :** Education is a medium to propagate the idea of social change. In the past, great philosophers, educationists and social reformers have successfully used education to propagate the idea of social change. Rousseau, Mark, Stalin etc. brought social changes through devising suitable educational system.
9. **Education Socializes the Younger Children :** The major concern of education has been to socialize the younger children in rural communities, tribal areas and simpler societies with a view that they would be able to adjust themselves with the present dynamic world.

John Dewey, The American Philosopher has said, "Teacher is a representative of God in society. School inspectors are not to criticise the work of the teacher but to help him in improving his work through sympathetic suggestion and advice."

In E.W. Gordon's view, "It is the task of the teacher to educate for change, to educate through change, to educate for orderly planned revolution and if necessary to educate through more disruptive revolutionary action."

The Role of School in Bringing about Social Change

1. **Relations with Social Order :** The size form and set up of a school depend upon the prevalent social order. But social order has some aims, values and traditions. The school works according to the social order. If there occurs change in society, school is bound to reflect the same change in its working and operation.
2. **Development of Capacities and Efficiencies :** A school not only works for preservation of cultural heritage of a society, but also it looks to future also. It tries to foresee the future needs of the society and tries to develop more and more capabilities and efficiencies of the individual.
3. **Contact with Wide Environment :** The environment of school is very wide and varied in comparison with narrow environment of a family. School provides children a very wide environment by its varied activities, programmes and experiences.
4. **Promoting Continuity :** A school preserves the cultural heritage of society. It transmits this heritage from one generation to another generation. Thus school promotes continuity of society in an effective manner.
5. **Meeting the Economic Needs of Society :** Education promotes the economic efficiency of individuals. As the school meets the economic needs of individuals, it plays an important role to add to the prosperity of society.
6. **Simplification of Socio-Cultural Patterns :** A school tries to simplify the bewildering variety of socio-cultural patterns. It preserves them for use and understanding by children.

7. **Glorious Future** : A modern school tries to plan for a very bright and glorious future of society. Thus, it not only preserves the glories of the past but also tries to make society achieve greater and glorious height of fame in future times.

Explain the role of education in environmental protection and conservation.

OR

Discuss the scope of environmental education at school and college level.

Ans. Education plays a vital role in improving the environment and living style of the members of the society. Each member of the society should have knowledge of environmental education, so that, he or she can contribute directly or indirectly in controlling environment pollution. Environmental education enables people to learn how hazardous environmental pollution, population explosion and resource depletion could be.

According to Horn, "Environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitude necessary to understand and appreciate the inter-relatedness among men, his culture and his biophysical surroundings. It also entails practice in decision making and self-information of a code of behaviour about issues concerning environment quality."

According to United States Public Law, the Environmental Education Act states Environment Education as : "The educational process dealing with man's relationship with his natural and man-made surroundings, and including the relationship of population, pollution, resources allocation and depletion, conservation, transportation, technology and urban and rural planning to the total human environment."

Objectives of Environmental Education

1. **Awareness** : To help social groups and individuals acquire an awareness and sensitivity to the total environment and its allied problems;
2. **Knowledge** : To help social groups and individuals gain a variety of experience in, and acquire a basic understanding of the environment and its associated problems;
3. **Skills** : To help social groups and individuals acquire the skills for identifying and solving environment problems;
4. **Identification** : To help social groups and individuals acquire skills for identifying environmental factors that affect individual behaviour.
5. **Diagnosis** : To help the students to diagnose the causes of social tensions and to suggest ways for avoiding them.
6. **Participation** : To provide social groups and individuals with an opportunity to be actively involved at all levels in working towards resolution of environmental problems.
7. **Analysis** : To enable the social groups and individuals to analyse the outcome of human environmental interactions.
8. **Attitude** : To help social groups and individuals acquire a set of values and feelings of concern for the environment and the motivation for actively participating in environmental improvement and protection.

Role of Teacher

Teacher needs to play an important role for the welfare of the society. Teacher

can impart environmental education to make students aware of their environment and encourage them to contribute more or less for the protection and conservation of environment.

Before teaching any environmental education, a teacher must have knowledge of different aspects related to environment. He should make the students aware about various factors which have positive or negative influence on the environment. It is the duty of the teacher to teach the students how to keep the environment 'Clean and Green'.

Being a responsible person of the society, the teacher should visit the locality to discuss the environment related problems with the people. He should make himself available to speak before the people on different issues related to environment.

Educational Programmes for Healthy Environment

It is widely accepted that education plays a vital role to develop a balanced and healthy environment. Schools and other educational institutions are the suitable places where environmental education can be taught in an effective way. Various programmes and activities can be organised in schools and colleges to make the students aware of the environment. Following are some of the activities that can be helpful in improving the environment.

1. **Awareness Programme in the Locality** : Both the teacher and the students should go to the local area and make the people aware of the environments. They should tell them not to cut trees and keep the environment clean and green. They should encourage the people to plant trees as much as possible.
2. **Debate and Discussion** : The students should be motivated to participate actively in debates and discussions related to environmental issues. Different topics like "Is it good to establish large scale industries in forest lands, Is it good to establish factories near river sides, Role of citizens for environmental protection, Role of government for the improvement of environment." etc. should be opened for discussion.
3. **Extension Lectures** : Social workers and environmentalists should be invited to schools to deliver lectures on the environment and its problems. They should teach the students how environment influences the human life and how environment is influenced by the human being.
4. **Environmental Projects** : Students should be encouraged by the teachers to undertake different projects related to environmental pollution, deforestation, soil-erosion, etc. While making the project, proper guidance should be given by the teachers, so that, the project can be more relevant and meaningful.
5. **Action Research** : The teacher should take problems related to environment and try to find out the solution of the problems. During the research, he should visit to different places concerning his study.
6. **Environmental Education in Curriculum** : Environment plays a key role for the existence of the human beings. So, environmental education should be a separate subject at all levels, from primary education to higher education. The topics like meaning of environment, nature, need and importance of environment, factor affecting environment, effect of environmental degradation, methods of improving environment, etc. should be included.

7. **Declamation Contents** : Declamation contests should be organised in the school. The students should be encouraged to participate in the contents on environmental degradation.
8. **Visit to Industrial Areas** : Students should be taken to the industrial areas where they can see and smoke and pollution that cause degradation of the environment. Teacher should make them realize how industrial pollution affects the environment badly.
9. **N.S.S. Programme** : N.S.S. Programme should be organised by the school to encourage the students for team work. The students should be sent to different places to work for the improvement of the environment clean. Besides, they can also motivate the people to work for making a healthy environment.
10. **Films** : Films related to environment problems should be shown to the student, so that, they may be able to know different problems like water pollution due to industrial wastage; air pollution; deforestation; causes and consequences to global warming etc.
11. **Keep the Campus Green** : The campus of the school should be covered with plants and trees so that the students can understand the importance of healthy environment. Students should be asked to take care of the trees with the supervision of the gardener.
12. **Organising Picnics** : Picnic is one of the most important co-curricular activities, where they can take the fresh air, and see the beautiful green and healthy environment.

Apart from the above, the schools and colleges should organize various co-curricular activities like seminars, model competition, writing articles, inter-college chart making competitions, gardening, celebrating cracker free Diwali, Exhibitions, etc. to make the students aware of their environment and encourage them to contribute for the protection or conservation of the environment.

In conclusion, we can say that, education and environment are interrelated for man's quality living and happy life. Environmental degradation is very much related to man's overuse of natural resources.

Overexploitation of natural resources to meet the needs results to degradation of environment and pollution of various types. Hence man has to face new problems. In this background, there is need to educate him as how to protect the environment; how to conserve it; how to utilise resources and how to maintain ecological balance and human relationship environmental education has emerged as an integrated discipline which helps the learner starting from early education to tertiary level to understand nature and to live a balanced life.

Bring out clearly the concepts of education for national integration.
OR
 What is the need of National Integration? How can education inculcate nationalism in our students?

Ans. According to Pt. Nehru, "Let the citizens of the Republic of India, Stand up with straight backs and looks up at the skies, keeping our feet firmly plated on the ground and bring about this synthesis, this integration of the Indian people. Political integration has already taken place, but what earn after is something deeper than that an emotional integration of the Indian people so that we may be wedded into one strong emotional unit, maintaining at the same time, all our wonderful diversity."

A complete national integration and emotional harmony can not take place without emotional integration and emotional harmony.

Humayun Kabir's view, "National integration does not depend on race or language or religion or geography, single or collectively, though they help, but on the feeling of belonging to one nation."

Need for National Integration

The great need of the country is to strengthen national unity. National unity is essential for any country at any time. It is doubly so far India is view of varied composition of her population, the vast distance that separates his different parts, the vastly varying climate and physical features and conditions of the daily lives and occupations of the people.

1. **To Meet The Threat of Foreign Aggression** : National integration is vital for India's survival especially at a time when the country is under the perpetual threat of foreign aggression as well as the internal centrifugal force of regionalism, communalism, linguism, racialism etc.
2. **Essential in Views of Diversity** : National unity is essential for any country at anytime. India is a country of wide variety of population. Here people live in varying climate and physical features. They live life in wide variety of occupations. In such diversity, there is a dire need of national integration.
3. **To meet the challenge of the Present Times** : A nation is a nation because its people passionately and unanimously believe themselves to be so. National unity is the **sacred trust** that must be maintained at all costs.
4. **Essential For Fulfilment of Our Democracy** : National Integration is the pre-requisite for the fulfilment of our democracy. Otherwise the fissiparous tendencies in the country may lead to serious consequences.

Dangers to National Integration

SKILLED INDIANS SKILLED INDIA

The following are the tendencies and disruptive forces which pose danger to the national integration in India :

1. **Communalism** : Communalism is the greatest menace to the national solidarity in India. Even after the six decades of independence, communal clashes are occurring in different parts of the country. They undermine national unity, disturb emotional balance and put national freedom in peril.
2. **Casteism** : Casteism is another great obstacle in the achievement of the unity of the country. The different castes look the benefit of their own castes. They do not bother for national benefit. The role of casteism can best be seen particularly during the elections.
3. **Linguism** : The diversity of languages is one of the formidable obstacles in the path of emotional and national integration. National unity is fast yielding to linguism which is creating barriers in the social groups and various communities.
4. **Unemployment** : Unemployment intelligentia is the greatest threat to national cohesion. It causes frustration, complexes, conflicts, restlessness and resentment. A frustrated youth is country's worst enemy. Unemployed engineers, teachers, unemployed graduates and post graduates are adding to the devils share.
5. **Lack of Vision in Education** : Our educational system has not been linked to the national life. It has not fulfilled our needs and aspirations. There is

lack of vision in education. It will not carry the country along the path of progress.

6. **Lack of Social Sense** : It is unfortunate that in this country we lack social sense. We are not at all considerate to other people's needs and feelings. We are self-centered and do not realise that we have duties towards them as they have towards us.

7. **Persistence of Inequality** : Persistence of inequality is perhaps one of the great menaces to national integration in India. Equality of opportunity is lacking in every sphere educational, economic and social. There is a wide gap between the rich class and poor class of people and social discrimination against minorities still looms large.

8. **Regionalism** : Another hurdle in the national integration is provincialism or regionalism. It springs from the same sentiments which work behind communalism. Provincialism works in every walk of our national life-services, business, education etc. It is a great hindrance in our way of national progress.

Elements of Nationalism

According to Prof. J.S. Brubacher, the following may be regarded as the elements of nationalism :

1. Common language
2. Common history
3. Common boundaries
4. Common religion
5. Common customs and traditions

National integration is that cementing force that binds the citizens of a country in a unity. National integrity implies social, political, economic, linguistic and cultural unity. National Development is the development of a mental climate that would help react in terms of oneness, irrespective of religion, region or language of the people concerned.

National Integration Involves

- (i) The sentiments of nationalism;
- (ii) The feeling of oneness;
- (iii) Social, political, economic, emotional, linguistic and cultural unity.
- (iv) Common ideals of life and common code of behaviour.
- (v) The ability to subordinate sectarian and parochial loyalties to loyalty of the nation.

National integration means a heaven of freedom. It is a mental attitude, development of a mental climate that would help react in terms of oneness, irrespective of the religion, language or region of the people concerned.

In this way, nationalism implied the feeling of oneness among the citizens of a nation. Without the spirit of nationalism, the reconstruction of a country is not possible. Every nation comprises a number of big and small communities. They include people of different castes, different religions, different languages, and different cultural backgrounds. But inspite of all these variations, if these people think that they are of the same soil as they have been born of the same motherland, they can be labelled as nationalists. They are inspired by the spirit of nationalism. It is an ideal which motivates people to forget of their individual and group interests, for the sake of the interests of the nation.

Thus, nationalism has two aspects—the feeling of oneness among the citizens; and sacrificing individual and group loyalties for the sake of nations dignity and honour. True or pure nationalism means love and devotion for one's country but not at the cost of hatred for others. A true nationalist is a well-wisher of everyone. He strongly believes in world peace. The spirit of true nationalism in a person tends to make him a lover of internationalism.

A true nationalist stands for above party politics and is ever-ready to serve the nation and safeguard it from any type of outer dangers. The fundamentals of national unity are co-existence, tolerance, co-operation and unity.

Aspects of National Integration

The main aspects of national integration are as follows :

1. Emotional Integration means integrations of minds (i.e; thoughts) and hearts (i.e. feelings) of all the citizens of a nation.
2. Economic integration implies removal of all economic disparities and improvement in the living standard of the citizens of a nation.
3. Cultural Integration means appreciation, enrichment and preservation of the cultures of different groups.
4. Social integration implies eradication of casteism and enrichment of feelings of co-operation; unselfishness, social responsiveness etc.
5. Language integration means establishing interaction among various languages and development of communication through suitable languages.

EMERGING DIMENSIONS OF SCHOOL AND TEACHER EDUCATION

What are the emerging dimensions in schools restructuring?
OR
 Discuss how is curriculum changing so fast with the help of teachers, parents and community.

Ans. In the new vision of education, technology is an integral component. Technology is used to provide basic skills support, interface with information sources outside of the school, support individual student creativity, manage information about student performance and achievement, assist teachers in their dual roles as instructors and clerks and provide students with greater control over their own learning.

Technology is almost an icon in some school restructuring plans. In other settings, technology is emerging as an extention of the interaction between teacher and student. In almost all visions for restructured schools, it holds an important if still in determinate place.

How is the Learning Environment Changing?

Learning environments are being redefined. All the structural boundaries of the current model are being challenged. Students are staying with the same teacher or group of teachers for extended periods of time; with in the days; the school year and from year to year, in both elementary and secondary schools. Multiage groupings of varying combination, in which learners can proceed at developmentally appropriate paces and can serve as tutors for one another, are proliferating. The idea

that learning can occur only within four walls when twenty five young people interact with one certified teacher is rapidly being replaced with models in which varying combinations of adults and children interact both inside and outside of school. Time is one of the structural dimensions where the greatest amount of experimentation is occurring, particularly at the high school level. Blocks of time are being created that allow teachers to spend more time with fewer students in order to encourage more complex learning interactions. The length of the school day and school year are also being re-examined. Schools are extending their programs, beginning earlier in the day, continuing into the evening, meeting on saturdays and offering more summer opportunities.

Role of Teachers in the New Structures of Governance

In this emerging vision, governance decisions are made with broad-based input. New governance structures emerge to meet new needs; old ones change to achieve new purposes. How decisions are made depends on the situations and varies from consultative to participatory.

Teachers leadership is a crucial dimension in this new vision. Teachers are serving in new decision-making roles, and are taking more control over the conditions of instruction in schools. The roles are highly varied, often being specific to the school and the unique strengths and interests present among faculty.

How is Curriculum Changing?

Distinctions between subject areas in the curriculum are being re-examined. Here are numerous attempts to redesign curriculum so that learners can be actively involved in constructing meaning, rather than having the structure determined solely by the teacher.

The content, too, is under scrutiny. Is it relevant, accurate, meaningful? Is there a compelling reason for children to know the material? Can it be structured to allow all students to achieve higher level of mastery?

The world around the school is becoming a source for curriculum. Local issues, problems and resources are being integrated. Information from around the world, available to teachers and students via technology, serves as the framework within which local issues can be understood and examined, creating curriculum that allows students to understand global events in relation to the world in which they live.

What do you understand by Teacher Education? Discuss the need, importance and objectives of Teacher Education.

OR

What is meant by Teacher Education? Discuss its needs and importance.

Ans.

Meaning of Teacher Education

According to C.V. Good, "All formal and informal activities and experiences which give the ability to an individual to shoulder responsibilities of educational profession as its member, come under teacher education."

According to Munro, "The total educative experience which contributes to the preparation of person for a teaching position in schools, but this term is completely employed to designate the programme of courses and other experience offered by an educational institute for an announced purpose of preparing persons for teaching

and other educational service and for contribution to their growth in competency for such service. Such teacher-education programmes are offered in teacher colleges, normal schools, colleges and universities."

Views of S.M. Mukerjee: "Environment is needed in different fields of education and for this purpose teacher education is better because it widens the field of preparation of teachers."

According to V.S. Mathur, "No system of education, no syllabus, no methodology and no text-book can rise above the level of teachers. If a nation wants quality education, it must have quality teachers".

Nowadays Teacher Education contains all the features of Teacher student personality. We can then term Teacher Education as : Teacher Education is such an institutional educational process which prepares the teachers objectively and unitedly or which provides more education to those persons who are directly and indirectly connected with the process of education.

In this way, education is a big problem and include such programmes in it which help an individual in becoming a teacher. Under Teacher Education, the teachers are prepared for the different levels of education. The process of teacher education is better than teacher training. According to the famous educationalist Kilpatrick, "One trains circus performer and animals but one (gives) education to the teacher."

Teacher education is that knowledge, skill and ability which is relevant to life of "teacher as teacher". Thus a course in teacher education should seek to reshape the attitudes, remodel the habits and reconstitute the personality.

Need and Importance of Teacher Education

Without the proper education of a teacher, no education programme can be successful. Prof. Humayun has correctly said that in the absence of a good teacher even the best policy will fail. With the help of good teachers, the drawbacks in the education system can be removed. In every education policy, a teacher has an important place. The entire policy revolves around a teacher. He takes the students from the ignorance of darkness into the light of knowledge and helps keeping the torch of civilization burning.

There is no doubt that the level of education in the society depends upon the merits of teachers, and the merits of a teacher depend upon his training. The Secondary Education Commission has rightly said that 'we agree that in the reorganization of proposed education policy—the important elements are teachers, their personal traits, their academic abilities, their professional training, and their status in the society. Therefore, the teacher should be provided with the best type of training of improving the level of education in the society and for continuous improvement.'

Dr. Radha Krishan remarked about its importance, "The teachers place in society is of vital importance. He acts as the pivot for the transmission of intellectual tradition and technical skill from generation to generation and helps to keep the lamp of curriculum burning."

A teacher can justify his contribution to the society only if he is provided with the best possible professional education. The main reasons for the necessity of the teacher education are as follows :

1. **Knowledge of Teaching and Learning :** Teacher education helps the teacher to acquire knowledge about the principle policies and reaction of learner education. This further helps him in organizing and planning his

teaching material. This also helps in using the different aids of teaching and audio-visual aids.

2. **Knowledge of the Child** : Teacher education helps a teacher in understanding the abilities, interests, level of development, feeling, basic values, desires etc. of the students. This also helps the teacher to understand the problems of the student and hence he can solve them in a better way.
3. **Knowledge of Organising co-curricular activities** : Teacher education helps the teacher in understanding different co-curricular activities; in organizing, administering and in motivating them to participate in them.
4. **Knowledge of Organizing Guidance** : Teacher education helps teachers in Organizing Guidance programmes in the schools.
5. **Knowledge of Methods of Evaluation** : Teacher education provides knowledge to the teacher about the different methods of evaluation of the achievements of the students.
6. **Pre-requisite to better planned education** : For a purposeful and organized education, teacher education is the first necessity. The theoretical and practical aspect of every problem is dealt with a teacher education. Consequently, teacher education determines the form of the entire education system.
7. **Development of Proper Perspective of the Problems and Issues of the System of Education in India** : The programme of teacher education touches upon the various problems; trends and issues of modern Indian education e.g. environmental degradation, enrolment, drop-out rate, universalization of education etc. The teacher must develop proper perception towards these problems so that he is able to contribute towards solving these problems during his career.
8. **Knowledge of Methods of Evaluation** : A sound programme of teacher education teaches the various methods of evaluation to the teachers. It provides him knowledge of the different kinds of tests, construction of questionpaper. Question bank, internal assessment and grading etc.
9. **Essential for Planned Education** : Teacher education may be regarded as a pre-requisite for the promotion of planned and meaningful education. It helps in realizing the aims and objectives of education. The quality of the system of education depends upon the quality of its teachers and the quality of its teachers depends upon the quality of teacher education.
10. **Development of Various Qualities in Teachers** : Teacher education tries to develop the physical, mental and emotional qualities of the teacher. It teaches him personal, social and professional values. The inculcation of these values go a long way in developing an efficient and effective teacher.

Thus teacher education aims to develop the requisite professional skills and inculcate desirable values and positive attitude towards the profession.

Objectives of Teacher Education

The main aim of teacher education, in present times, is to prepare socially useful and effective teachers. Some of the main aims of teacher education are as under :

1. To develop in the teachers the skills of learning and studying the system, the activities, the principles and the theories related to teaching.
2. To help the teacher to understand the problems of the students so that he can guide the students in solving them.

3. To direct the teacher in understanding the form, aims and objectives of education.
4. To guide the teacher in organizing co-curricular activities and motivating the students to participate in them.
5. To help the teacher in understanding the individual requirements of the students and in adjusting the teaching process as per their requirement and in participating in the school Direction programmes.
6. To help the teacher in understanding the nature of the student so as to develop his intelligence.
7. To increase the knowledge of the teachers about the children and the teenagers' aptitude and reactions.
8. To train the teacher about evaluating students' aptitude, their abilities and their achievements in the subject courses.
9. To help the teacher in developing and using the various teaching aids, helping material, teaching material and audio-visual aids.
10. Also to help the teacher in providing knowledge as per the level of the class and also in lesson planning and organizing the subject-matter.

What are the major ills from which teacher education in your state suffers?

OR

What are the major problems of teacher education in India? Suggest some remedies for improving them.

OR

What suggestions have been given by the Kothari Commission to improve teacher education programmes in your state?

Ans.

ILLS OF MODERN TEACHER EDUCATION

SKILLED INDIANS SKILLED INDIA

These days teacher education has many problems like :

1. **More Emphasis on Quantitative Development** : After Independence emphasis has been laid on reducing the number of untrained teachers, by imparting training to them. As a result, the number of teachers has shot up so much, that many teachers have become unemployed. They have not got any jobs. This has had a bad effect qualitatively.
2. **Isolation of Teacher Education** : Isolation of Teacher Education is the prevalent method of Teacher Training. Isolation of Teacher Education is from the side of Primary and Middle levels and it is separate from the main Stream of University Education. It is also isolated from the daily problems of the teachers. These are not related to each other.
3. **Traditional Methods of Teaching** : Teaching Methods in Training Institutes and Colleges are stereotyped and old. These are related problems of life or the changing needs of today. Due to the use of old methods, teaching becomes uninteresting and dull. The reason is that our country adopted the Education Theory and Practice from England, which is still being followed.
4. **More Emphasis on Theoretical Knowledge** : In the programme of Teacher Education, more emphasis is given on theory. No attention was paid to practical side or on the application of that knowledge. For example, the pupil-teacher, makes a lesson-plan, which is not observed and evaluated

properly by examiners. Their defects are not pointed out, while teaching in the classroom. In the same way, no attention is being paid towards the practical aspect.

5. **Lack of Research Work :** There is lack of research and publication work in Teacher Training Institutes. Without the results of research and publication, the standard of teacher education cannot be improved.
6. **Short Duration of Training :** In the modern age, teacher training has become very complex. As a result of research, the scope of knowledge has become very wide. So it has become very important to gain expertise in the profession of a teacher, for being successful. To gain this expertise, the duration of the teacher training should be sufficient. The reality is that, this is not being followed. In most of the institutes, the duration of this course is one year. How can any one become an expert teacher, in such a little time?
7. **Lower Educational Qualifications :** In Primary and middle schools, the basic academic qualification of a teacher for training is only Matric. It is obvious, that the mental level of such teachers will be very low. These teachers will not be able to understand well, the developments that are taking place in the field of education and their inservice training will not prove to be effective. But some years back, Haryana and Punjab Govts. had raised this qualification from Matric to Higher Secondary level, which is an encouraging step.
8. **Selection Problem :** In Teacher Training, good students cannot be selected. During admission, very little attention is given to the fact, which candidate has the right aptitude for being a teacher. Unluckily, the Training institutes, take such candidates, as have neither, the ability for, nor interest in teaching. Those who do not find any other work, join Training Institutes. No great hopes can be placed on such people.
9. **Lack of Integrated Teacher Training :** There is a lack of integrated Teacher Training in prevalent education system. There is arrangement of different training institutes for different teachers. These training institutes have no mutual relation with one another, which is essential. Teacher Training should be taken up as a separate unit. It is not correct to have different institutes for different kinds of teachers.
10. **Lack of Facilities :** There is need for sufficient facilities for the improvement of Teacher Education. But due to economic problems, these facilities cannot be provided. In many institutes, there is shortage of teachers and in some others there are neither Libraries, nor laboratories and in some institutes, there are no taxi-related activities.

Recommendations for Improvement of Teacher Training Institutions

Recommendations of the Kothari Commission :

- I. **Removing Isolation of Teacher Education :** To remove isolation of Teacher Education from universities and life, the Kothari Commission has given the following recommendations :
 - (i) To remove isolation of university from life, the Kothari Commission has recommended that education should be treated as a separate subject and it should be an elective subject at graduate level.
 - (ii) To remove isolation of schools, the following recommendations have been made :

- (a) Guidance to be given to schools located in the neighbourhood of Training Institutes.
- (b) Extending Invitations to the former students of Training Institutes.
- (c) Organising practice teaching with the co-operation of certain selected schools.
- (iii) To remove isolation, there should be :
 - (a) Establishment of comprehensive colleges.
 - (b) Enhancement of educational qualifications and pay scales of preprimary and primary teachers.
- (c) State Level Bounds for Teacher Education : These Boards should decide syllabus, Text-books, Rules for Training Institutes and Examinations for Teacher Education.

- II. **Improving the Quality of Teacher Education :** The Kothari Commission has given the following recommendations for quantitative improvement of Teacher education :
 - (i) Textual knowledge should be given.
 - (ii) Professional studies should be encouraged.
 - (iii) Reforms in Teacher Training.
 - (iv) Development in special courses and programmes.
 - (v) The syllabus should be revised and it should be improved improving the Quality of Training Institutes :
 - (a) **Better Educational Qualifications :** The educational qualifications of the teacher should be improved.
 - (b) **Summer Institutes :** For in-service teachers, Summer Institutes, should be set-up.
 - (c) **Specific Rules for the Study of Certain Specific Subjects :** There should be special rules for the study of special subjects like, training to be given in the subject studied in of the first year of the Degree course.
 - (d) **Special Courses :** Special courses can be conducted for teaching special subjects.
 - (e) **Appointment :** In Govt. organisations, teachers with proper qualifications should be appointed.
 - (f) **Admission :** Efforts should be made for admitting good students.
 - (g) **Facilities for Hostels :** There should be arrangement for hostels in training institutes.
 - (h) **Provision for Study Leave :** There should be a provision for correspondence courses and study leave for Primary Teachers.
 - (i) **Increase in Duration of Training :** The duration of Training of Primary teachers should be increased.
 - (j) **Free Training :** No tuition fees should be taken for the training of teachers.
 - (k) **Size of Training Institutes :**
 - (1) At the primary level, the number of students should be at least 240 and the duration of the course should be 2 years.
 - (2) At the middle level, the number of students should be 200.
 - (3) Training Institutes at the primary level should be opened in rural areas and their teaching practice should be arranged in the neighbouring schools.
 - (l) **Encouragement of Newly Appointed Teachers :** Newly appointed teachers should have the opportunity to understand the working of the Institute, so they need enough opportunity. They should be encouraged

to listen to the lectures of good teachers. Along with this, new courses should be arranged for them on regular basis and these should become a permanent feature.

(m) **Raising the Standard of Teacher Education :** The following suggestions have been made for this :

- (1) **Substantial Funds :** The U.G.C. should make provision for enough funds for the development of Teacher Education in the five year plans.
- (2) **Financial Assistance to state Govts :** To develop Teacher Education, Indian Govt. should grant financial help to the states.
- (3) **Responsibility of the State Boards of Teacher Education :** On the state level, Education Board should take the responsibility of determining the level of Teacher Education.
- (4) **Joint Standing Committee for Teacher Education :** U.G.C. together with N.C.E.R.T. should set up a Joint Standing Committee for teacher Education. Able persons of the profession can be included in this and they should be responsible for establishing the level of Teacher Education.

III. Measures to Eliminate Deficiencies in Teacher Education : The defects of Teacher Education can be removed by the following methods :

(A) **Removing the Isolation of Teacher Education :** To make the professional training of teachers effective, it should be linked to the academic mainstream of the universities and on the other hand, it should be linked to the school life and to the development of education.

- (i) Removing the isolation of teacher education from university life.
- (ii) Introducing education as an elective subject-In the first and second course of degree education, education should be introduced as an elective subject.

(B) **Removing the Isolation of Teacher Education from Schools :** To remove the isolation of teacher education from schools, the commission has given the following suggestions :

- (i) **Re-organising Extension Work :** Extension work should be related to Teacher Training Institutes. Every Institute should be set up at 3 levels Preprimary, Primary, and Middle and Welfare Organisations should be set up there.
- (ii) **Establishing Effective Alumni Association :** Effective alumni of old students should be set up. All these can prove helpful in organising programmes and curriculum.
- (iii) **Organising Practice Teaching in Collaboration With Selected Schools :** Active co-operation should be sought from some selected schools for organising teaching practice programmes. They should be recognized as co-operative schools and should be given special aid.
- (iv) **Arranging Periodic Exchange of the Staff :** In Govt. schools and in Teacher Training Institutes, staff should be exchanged periodically.

(C) **Removing the Existing Separation of the Institutions :** The following steps should be taken to remove isolation existing between the Teacher Training institutes and those that impart physical Training and training in Craft and Arts on Different levels of education.

(i) **Upgrading all Training Institutions :** All the Preprimary and Primary level Training Institutes should be upgraded and brought to the level of university, and they should be put under the Teacher Education Universities.

(ii) **Establishing Comprehensive Colleges of Education :** On an organised basis, Comprehensive colleges of Education should be set up in all the states.

(iii) **Establishing State Board of Teacher Education :** On an organised basis comprehensive colleges of Education should be set up in all the states.

IV. Improvement in Selection System : While selecting students for Teacher Education, the following things must be kept in mind :

- (i) The Candidates chosen should be able and desirous.
- (ii) Only those students should get admission for teachers education, who have scored a minimum of 55% or more marks in B.A. or B.Sc.
- (iii) The students who had taken education as an elective subject at the degree level, should be given preference.
- (iv) In the career of teaching, only the ones, who have interest and aptitude, should be given admission. This can be found out by taking an interview.

V. (a) Appointment of Efficient and Competent Teachers : For making Teacher Education effective, able and skilled teachers should be appointed. From the lower level to the higher level, it should be seen, that the teachers chosen, have the educational background conducive to their career. According to the Kothari Commission, the teachers of Middle Training Institutes, should be double M.As., one M.A. in any academic subject and the other M.A. in education. Out of these, some of them should be Ph. Ds. also. Their pay scales should be equivalent to those of Lectures, Readers and professors. It is better, if they can be given two advanced increments, depending on their professional training.

(b) **Appointing Qualified Specialists :** For subjects like psychology, sociology, science or Maths, only specialists should be appointed.

(c) **Selecting Most Competent Persons :** In Govt. organisations, the staff can be exchanged with supervising officials. Sometimes undesirable persons are sent to teach in Training Institutes. The need is that only capable and competent people should be appointed for teaching.

(d) **No Excessive Admission :** To raise the level of Teacher Training, only the required no. of students should be admitted so that they can get jobs, when they finish their training.

VI. Improving Professional Education : The Kothari Commission has laid the greatest stress on qualitative Development of the teacher education. For this, all levels need to be re-organised. This re-organisation is dependent upon the following principles :

1. **Re-orientation of Subject Knowledge :** The colleges that train Primary and Middle calss teachers should have provision for the study of those subjects in which teaching work is done. The subject matter of these subjects should be carefully organised. It should include basic principles of related curriculum and reference material. 20% of the time of training programme should be devoted to the study of these subjects.

All the Middle level, innovation of the subject related knowledge should be undertaken with the help of the depths; of the University. Wherever necessary, help can be taken from Arts and Science Depths of colleges. This innovation of the subject related knowledge should be linked with the prominent teaching methods.

2. **Duration of Training Course :** The duration of Training Course of the

Primary Teachers should be of 2 years. For the college students, the duration of Middle-level Training should be of one year. But the number of working days should be increased to 230.

3. **Utilization of Professional Studies** : In the modern age, this fact has been experienced intensely that, the subject matter of professional course is not related to actual teaching. Such material should be arranged in professional courses, which is according to the professional and personal needs of the students. Too much burden of textual matter should be reduced. There should be co-ordination between different courses and these should be designed according to the Indian Conditions.

4. **Improvement in Methods of Teaching and Evaluation** : In Training Institutes, methods of teaching and evaluation occupy a significant place in the Training Institutes, so the candidates should be trained in these methods, which they will use in schools. These methods have a great effect on teachers. But it is a matter of regret, that even today, outdated and old methods of evaluation are used. Contact experience, and discussion through study can make the students very mature. Private-Library study, Review, Preparing Reports, Project work, Discussions, Seminars etc. should be the integral parts of the Training Institutes. There is need for constant improvement in Examination System. In evaluation methods, practice teaching, sessional work and internal evaluation methods should be included. Besides this method, their interest in keeping records will be generated and they will realise its importance.

5. **Emphasis On Practical Work** : In Training Institutes, emphasis should be given to practical knowledge, rather than theoretical knowledge. Student-teachers should be made to practise various skills thoroughly. Besides practice, there should also be a provision for professional knowledge :

- (i) Organisation of Student Councils
- (ii) Practical knowledge of Library functioning
- (iii) Construction of time-table
- (iv) Classification of Curriculum
- (v) Register work etc.

6. **Establishment of Comprehensive Colleges of Teacher Education** : To make the level of teaching of teacher education atmosphere inspiring, there should be a provision for all kinds of training in an organisation. This will enable the teachers of all levels to maintain a kind of relationship.

7. **Making Provisions for Facilities** : For trainees, there should be adequate arrangement for hostel facilities etc. There should be other facilities like library, Laboratory, workshop, Art Room, Audio-visual aids etc. To make improvement, serious efforts will have to be made.

8. **Encouragement to Research Work and Publication** : Education is a social process. There are continuous changes in this field. Due to a change in society, there is bound to be a change in Education. So, for this, new methods of evaluation through research should be used. It needs a lot of wisdom to reconstruct the curriculum according to the needs of the society. All this work is possible only through research.

There should be proper arrangement for making this knowledge reach students, through publication. The U.G.C. should encourage research

scholars. A research-scholar should get every possible facility.

9. **Improvement in Student Teaching** : For student training, there should be special provision for a widely arranged programme like Internship. This not only includes teaching practice, but also other areas of school like library, workshop, craft-room, playground activities, and the teacher should know his role in all this. The student teacher should not leave the school after teaching two classes, but should stay in school whole time to devote himself to studies.

10. **Part-time facility** : As far as possible, Teaching Institutes should have full time Training facilities. But this should not be expensive. It is essential for the teachers to improve their standard of teaching. Therefore, Teaching institutes should provide them the following facilities.

- (i) Correspondence education
- (ii) Part time courses

11. **Abolition of Tuition Fees** : No tuition fee shall be charged by the Teacher Training institutes from the students for any programmes so that not only the poor students but also the capable ones are attracted to them for admission.

Discuss the various programmes for in-service education for teachers.

Ans. There are certain programmes organized to impart in-service education for teachers :

I. **Seminar** : Seminars are an important means of imparting in-service education. Various seminars can be organized for solving various problems in education, such reforms in curriculum, new educational techniques etc. Teachers teaching in different schools should be motivated to take part in these seminars. In a well-organized seminar, the entire programme is conducted amicably. In such seminars, it is the organizers only who generally select the topics for discussion. The Director presents the subject before the participants; then it is divided into sub-subjects and is sent to subgroups for discussion. The participants in the seminar after exchanging their views on their particular problem reach a conclusion regarding its solution.

Advantages of Seminar

Seminars have the following advantages :

- 1. **Provides Opportunities for Friendly Discussion** : Teachers get an opportunity to hold discussion over a problem in a friendly manner. This improves their formal relations, and the teachers professional outlook also develops.
- 2. **Helpful in Self-evaluation** : Seminars help teachers in self-evaluation, so that they can effect changes in their desired classroom methods.
- 3. **Helpful in Making Quick Decision** : Seminars help teachers take quick decisions through the process of work division.
- 4. **Zest For Work** : With the rightful conduct of seminars, the inferiority complex among the teachers can be removed, and zest for work can be instilled in them. They develop independent thinking, which enables them to develop their independent personality and moral values. They begin to realize that they are also contributing to the practical solution of their problems, and they start feeling proud of their achievement.

5. **Doubts are Removed** : Seminars help in removing the doubts from the minds of the teachers.

II. **Workshop** : As is clear from the name, it means a 'place for work', a factory workshop is a new experiment in the field of education. In workshops, more stress is laid on practical work.

The participating teachers have to work actively in the workshops and in a seminar. All the participants have to work actively in a workshop and make a significant contribution.

Workshops can be organized differently, like—

1. Literary workshop
2. New Evaluation Techniques
3. Upkeep of Library
4. Curriculum Construction
5. Lesson Planning
6. Craft

Students can gain practical knowledge about these in the workshop. The best time for workshops is the summer vacation. The educational universities should organize such programmes with the help of Education Departments.

Essential Characteristics of Workshops

1. **Clear Purpose** : The purpose of the workshop should be clearly defined. This can help in reducing the expenditure.
2. **Participant Centred** : The activities of the workshop should be related to the problems, needs and interests of the individuals.
3. **Defining the Specific Problems** : The distinct problems of the participants should be allowed to be revealed and clearly defined.
4. **Tentative Groups** : Individuals having similar problems should be segregated in well defined and tentative groups.
5. **Personal and Social Growth** : Not only the professional problems of the participants should be solved, but their personal and social growth should also be ensured.
6. **Continuous Evaluation** : In workshops continuous evaluation is done not of the individuals but of some definite individuals. The workshop should also be continuously evaluated.
7. **Length of the Session** : The length of the session should be long enough.
8. **Wide Representation** : Different individuals from teaching profession should get representation in the workshops.
9. **Informal Activities** : Entertainment and Informal activities should be given due attention.
10. **Extensive Collection of Resource Materials** : There should be extensive collection of useful resource material for the participants as per the finance.
11. **Full Time and Part Time Staff** : Both full time and part time staff should be employed. In part time jobs, mainly specialists are employed.
12. **Average Duration** : The average duration of the workshop can be from three to ten days.
13. **Usual time-table** : The usual time-table should include usual meeting of small groups. There should be sufficient time for personal work and study. There should be walking space in the school and there should also be time for preparing the report of the workshop.

Values of Organising Workshops

1. **Opportunities for Discussion** : Workshops help in promoting informal relations and one gets plenty of opportunities for friendly discussions.
2. **Opportunities for Professional Growth** : Workshops widen professional attitude. With mutual contacts and co-operation, professional prestige also grows.
3. **Group Thinking and Joint Planning** : Workshops develop group thinking, joint planning, co-operative work and the Democratic process.
4. **Personal Satisfaction** : Workshops provide respect and satisfaction for professional training. A workshop develops the hidden powers of the teachers.
5. **Intensive Study of Problem** : Workshops provide opportunities to teachers so that they seriously study their professional problems. The activities of a workshop are based on the problems, needs and interests of the participants.
6. **Self-direction** : Self direction is a trait which is achieved through real experience. The participants in a workshop fully participate in its planning and their actions are based on its objectives.
7. **Provides Leadership** : Sometimes superior quality leaders emerge in the workshops, which is not even thought of.

III. **Refresher Courses** : The main work of the refresher course is to make others aware of the new developments in the field of education. Such courses are organized to highlight new educational methods and new experiments in the field of education. Teachers get fresh knowledge through refresher courses. Refresher courses develop study proficiency. These make the teaching interesting. These are a valuable source of the expansion of new knowledge.

Participation in these courses develops educational efficiency. It creates interest in studies. It is the best means for the growth and expansion of knowledge.

Suggestions for the Organisation and Administration of Refresher Courses

1. **Role of the Colleges of Education** : Educational colleges along with educational officers should guide in organizing refresher courses for the teachers from higher schools. In real sense, such courses should be professional courses.
2. **Role of the University** : Universities should organize short courses for college and schools because this activity does not come within the purview of the colleges alone.
3. **Place** : Refresher courses should be held in those training colleges where there is a facility of books and the related material but hill stations which are health resorts can also be selected for such courses.
4. **Time** : The best time for refresher courses is the holidays, where the teachers are free from classroom teaching.
5. **Contents** : The contents of the short-term professional refresher courses should be well-organized. The following contents can be included in it :
 - (i) Education Psychology.
 - (ii) Sociology.
 - (iii) Child care.
 - (iv) Mental Health.

- (v) Providing training in Tests and measurements.
- (vi) Providing knowledge of the results arrived at in the field of researches and experimentation.
- (vii) Providing knowledge about the educational plans floated by the government and other institutions.
- (viii) Exhibitions, Practical activities, group discussion and tours.

IV. Conferences : Conference programmes are also an important part of inservice education. A conference should be held annually or half- yearly. In such conferences changes can be made in any subject related to education. The purposes of conferences are selection of course books, use of new methods of teaching and evaluation, discussion on educational experiments and guiding the students of backward classes and those that are slow learners. The aim is to bring reforms in such subjects. Conference of this nature has the following advantages :

1. Exchange of views.
2. Discussion of topics relating to education.
3. Good opportunities for the teachers to express their view points.
4. Development of the spirit of self-confidence.

V. Study Groups : In-service education can also be provided by Discussion Centres and by Study Groups. Seminars and Group Discussions are helpful in forming study groups. The members of the study groups meet at regular interval of time, hold discussions and create new teaching methods. Study Groups play a significant role as organized groups; because they are instrumental in promoting innovations, proper implementation of the curriculum, good methods and good examination process. Lectures, exhibitions and trips are also arranged through study groups. Various conferences of the subject teachers should be organized at different levels. This will raise the standard of study groups.

VI. Professional Writings : In order to familiarize the teachers with the New and Developmental work, the magazines and books published by the Extension Service Departments and NCERT should be made available in the library of each school so that by studying them, all the teachers get to know all the education related to new developments. For this purpose, the Headmaster and the Librarian should pay special attention.

VII. Extension Lectures : Any school or Training Institute can organise lectures of experts in different fields. To organise such lectures, help can be taken from the extension service of the nearest college.

VIII. Correspondence Course : These days the spread of education is fast gaining pace. This is a perfect way of imparting education to in-service teachers. N.C.E.R.T. has taken powerful steps to reduce the number of untrained teachers in the secondary schools by recognizing the correspondence courses and summer courses.

The correspondence course generally commences in the Summer Holidays. The teachers can make use of these programmes and benefit from them. It is a great source of attaining education for the in-service teachers.

Advantages :

- (i) Education comes to the teachers at their door steps.
- (ii) There is saving of time and memory.
- (iii) Excellent avenue for the expansion of education.
- (iv) Good use of time and inculcation of good habits.
- (v) The number of untrained teachers becomes less.

Suggestions for the improvement of In-service Training Programmes

After knowing about the significance of inservice training, its need, its different kinds and the various programmes organized in it, the question arises, how the teachers can be inspired to join this training, and what improvements should be brought about in this field.

Suggestions for motivating the teachers for in service trainings.

- (i) The teachers should be motivated to join the inservice training by the officials.
- (ii) The facility of taking leave should be available, for attending the training.
- (iii) Promotions and higher pay scales should be based upon in-service education. This will make them understand the significance of this training and try their best to join it.
- (iv) If the teachers do not add to their professional qualifications, their increments should be stopped.
- (v) If some teacher wants to go abroad being in service, then he should be granted Financial aid, so that it encourages other teachers to pursue this course.
- (vi) The organisation of in-service training should be conducted on a hill station or at any other attractive place so that it creates interest in the teachers to attend this.
- (vii) The programmes of in-service training should be purposeful and effective.

Suggestions for Improvement of Training

- (i) **Interesting Programmes :** The programmes of in-service training should be interesting. This will attract the teachers automatically. They will be interested to take part in it. The atmosphere of these programmes should be encouraging.
- (ii) **Well Organised Libraries :** In schools, a sufficient amount of money should be spent on the setting up of libraries, so that the teachers can add to their knowledge.
- (iii) **Welcoming the opinions :** All the people who attend the seminars, the study groups etc. should be welcomed.
- (iv) **Adequate Facilities :** There should be adequate facilities for teachers who are taking part in these programmes. For this work, the teachers should be given holidays generously.
- (v) **Economic Aid :** The state government should give economic aid to such institutes that give training to inservice teachers.

KNOWLEDGE AND PEDAGOGY

- Define Knowledge. Explain the methods of acquiring knowledge.
OR
- Describe the concept and sources of knowledge.
OR
- Different methods of Aquiring knowledge.
OR
- Explain the different types of knowledge and methods of obtaining these.

OR

Describe the sources of knowledge.

Ans.

Meaning or Concept of Knowledge

Knowledge is light. Just as light dispels darkness, in the same way, knowledge dispels ignorance. There is no single agreed definition of knowledge. Knowledge is defined by the Oxford English Dictionary as :

- What is known in a particular field or in total; facts and information;
- Awareness or familiarity gained by experience of a fact or situation.
- The theoretical and practical understanding of a subject.

From the Indian point of view, knowledge is named as Vidya. It involves facts about reality, and cognitive changes as well. There is mental growth in its process.

The term knowledge is also used to mean the confident understanding of a subject and use it for a specific purpose.

Religious Interpretations

The concept of knowledge has been interpreted differently by different religions. For example, Hindu Scriptures present two kinds of knowledge—Paroksha Gyana and Aproksha Gyana. Paroksha gyana is second hand knowledge. It is the knowledge obtained from books, hearsays etc. Aproksha Gyana is the knowledge gained by direct experience i.e. that is the In Christianity. Knowledge is one of the seven gifts of the Holy spirit.

In Islam, knowledge or 'ilm' has been given great significance. The Quran asserts that knowledge comes from God and various habites encourage the acquisition of knowledge.

In short, the meaning or the concept of knowledge may be viewed as :

- Acquaintance with facts or truths; principles as a result of study or investigation.
- Acquaintances or familiarity gained by experience.
- Awareness of a fact or circumstance.
- The body of truths or facts accumulated in the course of time.
- The fact or state of knowing.

Nature of Knowledge

The dictionary meaning of knowledge refers to 'assured belief', that which is known; information, instruction, enlightenment, learning practical skill. The nature of knowledge can be understood with the help of its characteristics as given below :

- Knowledge is a means to reach truth.
- Knowledge is verifiable.
- Knowledge is based on human experiences.
- It is rational by nature.
- It is a structure of information and well organised systems of facts.
- Language is the vehicle of knowledge.
- Knowledge is the product vehicle of knowledge.
- It is objective as well as subjective in nature.
- The foundation of knowledge is based on meaning of words, terms and concepts.
- The material for knowledge is thought.

Basis of Acquiring Knowledge

Knowledge is acquired at three stages of human experience. These stages are—

- Sensory Knowledge based on Senses :** Senses are the primary means to receive knowledge. This knowledge is known as empirical knowledge. It leads to formation of impressions, perceptions and sensory awareness about physical world.
- Rational Knowledge based on Reasoning and Logical Thinking :** Rational knowledge is the higher level than that of sensory knowledge. Here mind is the centre. Here rational thinking and reasoning are the means of acquiring knowledge.
- Spiritual Knowledge based on Divine Wisdom and Intuition :** Spiritual knowledge is the highest order of knowledge. Here spirit is at the centre. Self-knowledge, self-awareness, self-realization are the end points of spiritual knowledge. Divine wisdom is based on spiritual consciousness and awareness of man.

Besides these, the instruction in classroom can be designed and programmed as per the nature and the level of knowledge by teachers and curriculum makers.

Methods of Acquiring Knowledge

Philosophers and educationists have brought out specific methods for acquiring knowledge. These are discussed below :

- Appeal to Authority :** The knowledge which is attained by having confidence in authority is known as authoritative knowledge. This method of acquiring knowledge is related to the special fields of knowledge and the specialists working in those fields. That body of knowledge is accepted as true knowledge.
- Appeal to Tradition :** Man depends for solutions to many of his problems on tradition. He accepts many traditions of his forefathers or culture. But it is not always necessary that every thing accepted from our tradition is right and valid. History is the proof that many traditions which prevailed for years were later found to be wrong and had to be rejected. Therefore we should evaluate the knowledge acquired from the tradition before accepting it.
- Appeal to Senses :** In this case, senses are the main sources of knowledge. One's awareness of self takes place through senses. In this method, the intake of knowledge can be coloured by environmental factors. Here the knowledge depends on certain external factors from the environment.
- Inductive and Deductive Methods :** Inductive method starts with particular examples. The learner tries to arrive at certain conclusion which is known as generalisation. This leads to formulate a law or principle. On the other hand, in the deductive method, the learner starts with generalisation or rule, then he comes to particular examples. Therefore, knowledge is gathered both inductively and deductively.
- Appeal to Experience :** Experience is one of the important source of acquiring knowledge. Our own personal experience or that of others is the most promotive, familiar and fundamental sources of knowledge. We learn many things from our own experience in our day-to-day life.
- Intuition :** The elements which help to attain knowledge through intuitive method are inspiration and illumination. These elements bring a struc-

tural change in the mental faculties of the learner.

7. **Concentration and Meditation** : Concentration is an activity of mind. In it mental energy is focussed on physical aid like candle light, flame or social object. In meditation, one concentrates for a longer time on any idea or image or mantra. Thus both concentration and meditation are the foundation of attaining knowledge. They lead an individual to infer and make link of the facts of knowledge to meaningful whole.

8. **Observation and Related Processes** : In this case, there are four sub-processes of attaining knowledge. These are :

- (a) **Observation** : It can be internal or external. It can also be natural observation or observation with the help of scientific instruments.
- (b) **Explanation** : The facts of knowledge are elaborated in logical manner and knowledge is accepted in a cohesive order.
- (c) **Prediction** : This process is related to the principle of cause and effect. The results are predicted. Both cause and effect are to be understood in a specific relationship.
- (d) **Control** : In this process results are filtered out by effective control on certain factors.

9. **Problem-Solving** : This step involves in the process of problem-solving. The solution of a problem becomes a part of knowledge. Therefore, problem-solving is an effective tool to acquire new knowledge.

Explain the different types of knowledge and theories of Truth.

Ans.

Types of Knowledge

Knowledge can be generated by experience. Such a knowledge is of two kinds—**Priori Knowledge** and **Posteriori Knowledge**.

A Priori Knowledge is the knowledge that is attained independently of experience. It means that there are certain assumptions that one takes for granted. This knowledge is non-empirical. For example, if a child is told that a certain object is a table, the child knows that the table is in space, that it is 3D. The knowledge is such as the child can forget.

Posteriori Knowledge : It is the knowledge which is gained through experience. Posteriori means afterwards. This knowledge is empirical, arrived at afterwards.

Indian View : According to Indian view, knowledge is of two types :

- (i) Para Vidya.
- (ii) Apara Vidya.

Para Vidya is related to physical world (external nature). It can be derived through five senses and reasoning. Apara Vidya is related to other-worldliness, spiritual in nature. It is the most elevated part of human nature. It is related to self, soul, spirit and God and their relationship.

Specific Types of Knowledge

Specific types of knowledge are determined through the source as its criterion. Following are the specific types of knowledge.

- (i) **Authoritative Knowledge** : This knowledge emanates from the authority or a specialist. Thus all research based knowledge is authoritative knowledge.

- (ii) **Scientific Knowledge** : This knowledge is gained through observation and experimentation. That is why it is known as scientific knowledge. It can be verified and tested by others. Here, both empirical and rational knowledge are involved.
- (iii) **Empirical Knowledge** : Knowledge drawn through senses observations is called empirical knowledge.
- (iv) **Rational Knowledge** : The knowledge drawn from reasoning is called rational knowledge.
- (v) **Pragmatic Knowledge** : The Knowledge which is useful and is of utility is called pragmatic knowledge. It is based on experience and observation. It is very useful in one's adjustment in life.
- (vi) **Revealed Knowledge** : The knowledge which comes from divine source and is communicated by prophets is called revealed knowledge. It is contained in religious books. This knowledge is classical and universal in nature. It is not subject to change.
- (vii) **Intuitive Knowledge** : It is subjective and spontaneous in nature. It is neither related to senses nor to reason. It can not be repeated by personal experience nor can be verified scientifically.

Theories of Truth

There are different schools of philosophy like naturalism, Idealism and pragmatism. They discover ways to know truth. They have revealed to us from new concepts, terms, ideas and thoughts regarding truth. Most popular theories of truth are as :

1. **Correspondence Theory** : This theory is based on the assumption that our ideas and thoughts have reference to certain external object or reality with which they correspond. Ideas and thoughts do not exist without external reality. In fact, every concrete object does have an idea or thought. There is some relationship between the object and idea or thought.

Characteristics of this theory are as written below :

- (a) Truth is objective. It has external basis.
- (b) Relation is pre-existent to the search for it.
- (c) Truth is researchable. It can be verified at any time.
- (d) School of Naturalism and Realism are based on the theory of correspondence in respect of truth and knowledge.
- (e) Observer does not add or subtract anything on his own.

2. **Coherence Theory** : This theory is based on the assumption that ideas or thoughts are interrelated and consistent. There is cohesiveness, logical connection and relatedness in ideas. In this theory, truth and knowledge are coherent by nature.

Characteristics of Coherence Theory :

- (a) There is logical correlation between facts revealing the truth.
- (b) Coherence theory is a statement of test of truth.
- (c) Consistence is the quality of this theory.

School of Idealism and constructionism are based on the theory of coherence regarding truth and knowledge.

3. **Pragmatic Theory of Truth** : It is based on the assumption of utility and usefulness. It believes that knowledge is true which enables a person to know about the situation and adjust with it. Here the main criterion is personal adjustment of the individual.

Characteristics of this theory are :

- Experience is personal.
- Truth is revealed through individual's personal experience.
- Experience works as an instrument for personal adjustment.
- Truth has no relationship with external reality.

Theories of truth and knowledge work as foundation to work out a scheme of acquiring knowledge. They show how to assimilate it to human experience to acquire knowledge and truth.

What is Pedagogy? Discuss the need of pedagogical Analysis.

OR

Define Pedagogy. How does Pedagogy serve effective Teaching?

OR

Write the concept of pedagogy. Write its importance in education.

Ans. Pedagogy is the discipline that deals with the theory and practice of education; it thus concerns the study and practice of how best to teach. Its aim ranges from the general (full development of the human being via liberal education.) Pedagogy is the art (and science) of teaching.

Effective teachers use an array of teaching strategies because there is no single, universal approach that suits all situations. Different strategies used in different strategies used in different combinations with different groupings of students will improve learning outcome. Some strategies are better suited to teaching certain skills and fields of knowledge than are others. Some strategies are better suited to certain student backgrounds, learning styles and abilities. Effective pedagogy, incorporation, an array of teaching strategies that support intellectual engagement, connectedness to the wider world, supportive classroom environments and recognition of difference, should be implemented across all key learning and subject areas.

Effective pedagogical practice promotes the well being of students, teachers and the school community. It improves students and teachers confidence and contributes to their sense of purpose for being at school; it builds community confidence in the quality of learning and teaching in the school.

Pedagogical Analysis and Effective Teaching

In simple meaning the term pedagogical analysis (a composition of two words pedagogy and analysis) stands for a type of analysis based on pedagogy. A good or effective teaching must accomplish the following objectives :

1. It should tell whether teaching is a process or product.
2. It should clearly indicate its constitutional elements or factors.
3. It should reveal its objectives.
4. It should say about its organizational or structural aspects.

So effective teaching is the teaching that successfully achieves the learning objectives by the pupils as identified by the teacher. The most effective teaching that which results is the most effective learning. In addition, the learning is a process not the product, it involves all those experiences and training through teaching of an individual; which helps to change the behaviour and prepare to take necessary adjustment and adaptation in change situation. There are essentially two simple elements to effective teaching :

- (i) The teacher must have a clear idea of what learning is to be nurtured.

- (ii) The teacher sets up and provides a learning experience that enables this to happen.

The root of effective teaching of a successful teacher is evolved in the following tenets :

1. Pupils learn best in a positive and nurturing environment established by teachers who believe that every pupil is capable of learning.
2. All pupils have areas of strengths and interests that can be useful in advancing pupil learning. Effective teachers establish an instructional environment that will draw on these strengths.
3. Teachers take into account the whole pupil; in other words, they attend to the cognitive, affective, social and physical dimensions when developing an instructional program.
4. Active engagement and interaction facilitate pupil learning.
5. New learning is built upon previously learned information. Learning is enhanced when prior knowledge and cultural and social experiences are valued, acknowledged, and averaged throughout the curriculum.
6. Pupil learning is both individually and socially constructed; it is influenced by cultural, familial, and social context.
7. Meaningful assessment is both formative and summative; it relies on multiple measures including informal observations.

Need of Pedagogical Analysis

Pedagogy i.e., the science of teaching is a master plan that includes details of what is to be done by a teacher, the instructional strategies, instructional equipments and cardinal objectives of instruction. Depending on what learners can actually learn and what are the expectations set for learners of a particular stage of development, specific instructional objectives are determined and appropriate set of activities provided. The teacher decides instructional objectives, equipments and strategies with every aspect of learning conditions to be created. Favorable conditions for positive learning cell for knowledge of various factors operating in different conditions. Pedagogical analysis is appropriate objectives and strategies in various instructional situations and assess the levels the level of actual learning at the end. A comprehensive vision of required tasks, strategies for realization of specific goals facilitates effective teaching. So, pedagogical analysis offers enormous potential for improving the delivery of information in all forms of education. It involves various logical steps to arrive at logical inference. It also helps the students to understand concepts, principles or phenomena.

Again the learning environment created accordingly enables to—

1. Relate individual fragment of knowledge to real experience in life and work.
2. Develop skill and relate facts as a part of a larger organized completely. Realization of specific goals, facilitated by a detailed planning results in effective teaching.

Steps of Pedagogical Analysis

Step-1 : Divide the contents of the selected unit into suitable sub-units and arrange the selected sub-units into a number of required periods.

Step-2 : Briefly write the essence of the content of the selected sub-unit.

Step-3 : Write appropriate previous knowledge required for the sub-unit.

Step-4 : Write appropriate instructional objectives to be selected for the sub-unit :

Step-5 : Select appropriate teaching strategies for the sub-unit according to the following instruction :

- (i) Write the name of the methods applied.
- (ii) Mention the teaching aids required.
- (iii) Briefly illustrate the necessary demonstration and/or experimentation required.
- (iv) Mention the necessary board work required.
- (v) Write probing questions related to the sub-unit and provide appropriate answers for them.
- (vi) Prepare a worksheet for the sub-unit.

Step-6 : Give suitable examples/illustration/and logics for the sub-unit.

Step-7 : Prepare a table of specification for the sub-unit. Write at least six criterion referenced test-items each with specific criteria for sub-unit.

How Pedagogy Serves Effective Teaching?

The science of teaching pedagogy is found to serve the following two main objectives in the scheduled task of a teacher's teaching.

- (i) Teaching should be carried out as smoothly as possible and
- (ii) It should result into the maximum output in terms of the expected better teaching outcomes.

What is suggested by the science of teaching on pedagogy for the realization of its above said two main objective now carries a wide significance at this stage.

A teacher has before him content material and learning experiences related to that subject in a particular class. In this way, his success in his teaching task depends upon the extent to which he is successful in realization of the teaching instructional objectives. He can go on smoothly in his teaching task only if he follows suitable methods, devices, techniques and aid materials etc. for providing the fruits of his teaching to his students. How properly is he proceeding in his teaching task and how he is trying to achieve the set teaching objectives, that now needs the help of a continuous system of testing and measurement known as evaluations of teaching outcomes. The results of such evaluations provide an appropriate feedback to the teacher for bringing desirable modification in his methods and materials of teaching including justifying the need of bringing alteration in setting of instructional objectives. In this way, science of teaching or pedagogy advocates a total mutual relationships and interdependence among the following four pillars of the teaching learning process for attaining best possible results in the task of teaching i.e. effective teaching.

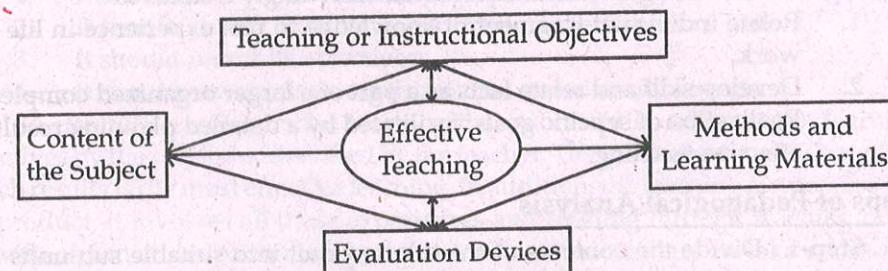


Fig : Pillars of the teaching learning process

Science of teaching or pedagogy in this way lays down the above-mentioned four essential pillars along with their inherent mutual relationship and inter-

dependence for being considered essential in the realization of the desired success in a teaching task. It is the message and spirit of the science of teaching or pedagogy that needs to properly carry out in any scheme of the analysis of the content material to a subject and then only then such analysis of the content may be termed as pedagogical analysis of the given content material. In the light of what has been said above, a teacher may proceed in the way given below for analyzing the contents of the syllabus of his subject as well as the contents of the topic to be taught in the classroom by preserving the spirit or message conveyed by the science of teaching for pedagogy.

- (i) The contents of the subject should be got analyzed properly into major and minor sections/units/concepts etc. and sequenced as well as organised as methodically as possible.
- (ii) Only a desirable amount of the content material enabled to be covered properly in the scheduled subject period should be taken into hand at a time in the space of a topic to be taught by the teacher for his scheduled classroom.
- (iii) The topic in the hand should also be analyzed properly in the form of major and minor concepts/single concepts etc.
- (iv) The teacher should now clearly lay down the teaching or instructional objectives related to the topic in hand by writing them into the specific behavioural terms.
- (v) How can these stipulated instructional objectives be achieved properly by teaching contents of the topic in hand should now be made a point of consideration for proceeding further on the path of pedagogical analysis.
- (vi) In the last, there arises a need of exercising proper control over the different components of the teacher learning process.

In this way, effective teaching through pedagogy display skills at creating curricula designed to build on students present knowledge and understanding and move them to more sophisticated and in-depth abilities, knowledge, concepts, and performances. In addition, pedagogy helps to make a range of instructional strategies and resources to match the variety of student skills and to provide each student several ways of exploring important ideas, skills and concepts. Pedagogy makes a teacher : how to work as facilitators, coaches, models, evaluators, managers and advocates. Moreover, teachers know how to utilize various forms of play, different strategies for grouping learners, and different types of media and materials. Through pedagogy teachers observe and assess students in the context of on-going classroom situation like collecting and interpreting a variety of types of evidence to evaluate where each student is in a sequence or continuum of learning and development and know how to move from assessment to decisions about curriculum, social support, and teaching strategies, to increase the prospects for successful learning.

In conclusion, effective teaching necessitates making difficult and principled choices, exercising careful judgement and honouring the complex nature of the educational mission. In addition to the technical knowledge and skills, teachers have to use in their daily practice. They must also be aware of the ethical dimensions of their profession. In this light, the primary mission is to foster the development of skills, dispositions, and understanding, while acknowledging thoughtfully and responsibly a wide range of human needs and conditions. Thus, teachers must master a repertoire of instructional methods and strategies, yet remain critical and reflective about their practice. Based on the latest developments in pedagogy, teaching has become more than an activity that conserves valued knowledge and skills by transmitting.

Chapter-5

Support System of Education

RE-CONCEPTUALISM OF LEARNING RESOURCES-TEXT BOOKS, WORK BOOKS, MULTIMEDIA, ETC.

What do you mean by support system of education? Describe the goals of support system in different learning resources.
or
 What do you mean by learning resources? Explain any two types of learning resources.

Ans. In 1998 Educational support systems began to specialize in developing special education program for charter and transformation schools. Educational support system specializes in the effective management and operation of integrated special education service delivery systems and has designed and managed special education programs in the largest charter schools. This support system help the student in making education innovative. Many learning resources like text books, work books, multimedia etc. help students in getting good and systematic education. The goal of the educational support system is to provide students with additional assistance needed for them to succeed or be challenged in the general education environment. This is the collective responsibility of everyone in a school. This system includes an effective educational support team. The function of the team is to recommend and manage instructional and other interventions and resources necessary to help teachers accommodate the unique need of the at risk students.

The building principal needs to assure that the schools educational support system is designed to provide students with needed accommodations and supplementary aids and services regardless of their eligibility for categorical programs; includes a means to determine on a regular basis the effectiveness of accommodations, supplementary aids and services, and programs and activities in meeting student needs; includes collaborations with families; community supports and health and human services. In this support system of education there are many learning resources, which are helpful in easy and innovative teaching system. Learning resources are texts, videos, software, and other materials that teachers use to assist students to meet the expectations for learning defined by provincial or local curricula. Before a learning resource is used in a classroom, it must be evaluated and approved at either the provincial or local level. Evaluation criteria may include curriculum fit, social considerations and age or developmental appropriateness.

So, teaching aids play a very important role in teaching-learning process. Importance of teaching aids are as follows :

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1. **Motivation** : Teaching aids motivate the students so that they can learn better.
2. **Clarification** : Through teaching aids, the teacher clarify the subject matter more easily.
3. **Discouragement of Cramming** : Teaching aids can facilitate the proper understanding of the students which discourage the act of cramming.
4. It saves time and money.
5. **Classroom Live & Active** : Teaching aids make the classroom live & active.
6. **Increase the Vocabulary** : Teaching aids can facilitate the proper understanding of the students which discourage the act of cramming.
7. It avoids dullness.
8. **Direct Experience** : Teaching aids provide direct experience to the students.

Need of Teaching Aids

1. Every individual has the tendency to forget. Proper use of teaching aids helps to retain more concept permanently.
2. Students can learn better when they are motivated properly through different teaching aids.
3. Teaching aids develop the proper image when the students see, hear, taste and smell properly.
4. Teaching aids provide complete example for conceptual thinking.
5. The teaching aids create the environment of interest for the students.
6. Teaching aids help to increase the vocabulary of the students.
7. Teaching aids help the teacher to get sometime and make learning permanent.
8. Teaching aids provide direct experience to the students.

Types of Teaching Aids

There are many aids available these days. We may classify these aids as follows :

1. **Visual Aids** : The aids which use sense of vision are called visual aids. For example—actual objects, models, pictures, charts, maps, flash cards, flannel board, bulletin board, chalkboard, overhead projector, slides etc. Out of these black board and chalk are the commonest ones.
2. **Audio Aids** : The aids that involve the sense of hearing are called Audio aids. For example—radio, tape-recorder, gramophone etc.
3. **Audio-Visual Aids** : The aids which involve the sense of vision as well as hearing are called Audio-visual aids.

For example : television, film projector, film strips etc.

What is a Text-Book? What are the uses of text-books?
OR
 What is the importance of text books in teaching learning process?
OR
 Describe the criteria for selecting a good language text books.

What is a Text-Book?

A text book contains selective and systematic knowledge. Its criteria are for

coherence and sequence. It is simple to be understood by the intended learner. It is not a bare statement of knowledge. It uses various teaching learning devices to fulfil the desired instructional role. In it, the subject matter receives a rich dose of pedagogy. It includes devices for practice, application, motivation and fixation of learning. Thus, a text-book is said to be "the teacher in print." It differs from an ordinary book as it combines teaching-learning techniques and motives within it.

Uses of Text-Books in Language

Following are the reasons, which make good text-books an indispensable part of the study and teaching of English :

1. **Helping the Teacher** : Text-books provide useful guidelines along which a teacher can plan his day-to-day teaching. While actual teaching in the classrooms, they serve as reference books. They suggest activities to be taken up in the classroom and outside. Text books can be used to help the teacher in finding out new ideas.
2. **Helping the Pupils** : A text book is the most accessible guide, a dependable reference book and an all time companion for the pupil. He makes use of it to prepare himself in advance for learning in the classroom. He revises and reinforces the classroom learning through text-books. He does assignments at home with their help.
3. **Helping Self-teaching** : The text book makes self-teaching possible through printed materials. A good text book is an insurance against illiteracy at home.
4. **Providing Logical and Comprehensive Material** : A good text-book sets a standard of maximum essential to be achieved by pupils of all categories : It provides pupils a direction for further studies.
5. **Ensuring Uniformity of A Good Standard** : Text-book provides a high way for carrying better practices to all schools. The text book ensures some sort of uniformity of good standard.
6. **Providing Base for Both the Teacher and The Pupils** : A text book contains a minimum essential knowledge it can provide a point of departure for a more comprehensive link. It focuses attention on the some issues, events, sequence and circumstances and serves a rallying point.

Criteria for a good English Text-Book

1. **Achieving the Purpose of Teaching** : A text-book should enable children to appreciate India's cultural heritage and to recognize. The text-book should provide the understanding necessary for the promotion of national goals, through its content, style of presentation exercises and illustrations.
2. **Child-centred** : A good text-book is suitable to the age, ability and interests of the pupils. It should be addressed to pupils of a particular age-group and of a particular society. As the world of the child expands with his growth, a text-book must reflect the stage he has reached.
3. **Clear and Self-explanatory Arrangement** : A text book should have a detailed table of contents. Its material should be arranged under headings, sub-headings and to be easily comprehended by the pupils.
4. **Opening up Various Avenues of Thought and Study** : The text book should create interest and help to develop it by suggestions as to how the matter given in the book may be followed and developed. It should suit

to the age of the pupils. It should give references to other books on the same subject. Thus, it should widen the outlook of the pupils. It develops their interest and opens new vistas of knowledge and discovery.

5. **Language suitable for the "Reading Age" of the Pupils** : The text book should be written in simple sentences for the younger children. It is essential to establish an effective communication with them. Its language should be accurate and appropriate to help in enriching children language.
6. **Well Illustrated** : A text book should be illustrated through visual aids such as photographs, maps, pictures and picture-diagrams. Illustrations should be well chosen and connected with the main theme of abstract concepts. Coloured illustrations have an important place in text-book for primary classes. Illustrations should be such that the children may easily make out the various details.
7. **Simple, Interesting and Attractive** : The text-books should be simple, interesting and attractive. It should give exercises at the end of a unit/ topic. It should enable the pupils to focus their attention on the right points in the discussion for concentrated study.
8. **Free From Indoctrination** : A good text-book presents a comparative view of the ideas of different people expressed on a particular phase of life. It should not contain superficial and misleading generalizations. It should not contain extreme nationalism. It should tell only the truth, the whole truth and nothing but truth.
9. **Up-to-date** : A good text-book should be frequently revised to eliminate obsolete statement. It must contain the latest information based on recent research. The sources of information should be authentic.
10. **Containing a Subject Index At The End** : Text-book for higher classes should contain a subject index at the end. It helps in developing independent study habits of pupils. It facilitates a combination of topics with chronological approach.
11. **Containing Lesson-units framed by teachers** : A good text-book will enable the pupils to derive the maximum benefit. They find its material meaningful and relevant.
12. **Promoting Group Effort** : A good textbook should contain suggestions for group projects on every topic. Assignments may be suggested with divisions to be jointly attempted by the groups. There should be suggestions on constructing models, preparing charts, etc.

Importance of Good Text-book

A text-book contains selective and systematic knowledge. Its criteria are for coherence and sequence. It is simple to be understood by the intended learner. It uses various teaching-learning devices to fulfil the desired instructional role. In it the subject-matter receives a rich dose of pedagogy including devices for practice application, motivation and fixation of learning. Thus, a text-book is said to be, "The teacher in print". It combines teaching learning techniques and motives within it.

The text book may be described as the centre of instruction. It is the teacher's tool. Its advantages are as under :

1. The text book is an aid both for the teacher and the taught.
2. It specifies and limits the content to be learnt in a particular year, at a particular stage.

3. It is a means to measure the standard or the achievements of the student.
4. It is a means to teach functional grammar.
5. It provides a good deal of graded vocabulary and maintains a uniform standard at every stage.
6. It helps the student to gain command over the common idioms and usage.
7. It provides easy learning of language as it has good illustrations.
8. It is an incentive for intensive and extensive reading to the pupils. It provides an opportunity to review the contents, which the learner might forget.

However, it must be remembered that the text-book is not the be-all and end-all of language teaching. A text-book is a generalization, but cannot meet the needs of every class. The teacher must apply the language to the needs and capacities of his class. He must use the language laid out in the book, as he uses any other tool for his use.

Advantages of Text-Books

1. **Giving Definite Intonation** : Text-books contain narrative details. They are a storehouse of basic information. They guide the pupils in knowing the essentials and how much they should remember.
2. **Establishing Common Background of Basic Intonation on the pair of all the Pupils** : Text-books help in introducing all the pupils to the key ideas of the unit. They can acquaint them with the vocabulary. Thus they help pupils learn enough to proceed intelligently.
3. **Setting Exercise** : A text-book contains exercises for setting the logic and imagination of students. Exercise may be set for compiling the list of the things-people would have used or needed in certain circumstances. Questions can be set on the illustrations given in the text-book.
4. **Learning Compositions** : Compositions help the child to think of events as actually happened. They give him opportunity to use his imagination in transforming text book information into something personal and vivid.
5. **Summarizing Learning** : A good text book summarizes the learning of the unit activities.
6. **Serving as a point of Departure** : Text-book serves as a point of departure for unit study, a frequent point of recall and a point of return.

Work-Book as a Learning Resource

Define work book. Describe the importance of work book in teaching.
OR
 Why work books are important in the text? Write advantages of work book.

Ans.

Meaning of Work Book

A book designed to guide the work of student by inclusion of questions, exercises etc. or in other way a book in which a record is kept of work completed or planned. Printed material accompanying a course text (text book) that contains exercises, problems and practice material to clarify and reinforce the lessons presented in the text book. The work-book, that allow the students to practice what they had learned from the text book.

Importance of Work books

Work books are often used in schools for younger students, either in middle school or elementary school. They are favoured because students can work directly in their books; eliminating the need for looseleaf and copying an advantage because they are usually smaller and lighter than text-books, which equates to less trouble when the student brings the book home to complete their homework. The big advantage is that they are great for self-study as they can usually be purchased with the answers in them. This means less marking for the teachers.

The course work books also have a mixture of activities they usually include grammar exercises, vocabulary, pronunciation activities, reading and sometimes listening. Work books are cheap in price, it can be tailored to the class/students when teacher teaching and the students can even get involved with its creation, perhaps selecting some of the items to be included, or creating their own worksheets to be included in other students book. A work-book provides real life examples of many of the techniques, strategies and tactics-student will need to master. The best work-books are tied specifically to the course learning objectives and other course materials. Work book also provides students with further opportunities to practice difficult grammar points and consolidate their understanding of related topics covered in grammar. Work books provide students with fun activities that help to strengthen their comprehension, reading and writing skills. The work books can also be used as a valuable assessment tool for teachers. Teachers are able to use the work that students do as a formative assessment for each lesson.

The work that students do in the work books activities can provide evidence for many of the performance guidelines in the assessment rubrics. Teachers can use the rubric to determine which performance guidelines are addressed in each work book activity. They can then check student's work to see if it "meets expectations" and "does not meet expectations" or "exceeds expectations" and record the outcome in the correct column of the rubric. In this way, the work books provide teachers with one more piece that helps them to assess their student's language acquisition. Ideally, teachers use anecdotal observation, oral assessments during art projects, and examples from student work in the work books to complete the assessment rubric.

Multimedia Resources

What is Multimedia? Discuss its importance in today's educational system.
OR
 Define multimedia resources. Write its advantages and disadvantages.

Ans.

Meaning of Multimedia

Multimedia is the integration of multiple forms of media. This includes text, graphics, audio, video etc. e.g. a presentation involving audio and video-clips would be considered a 'multimedia presentation'.

Educational software that involves animations, sound, and text is called 'multimedia software'. CD's and DVD's are often considered to be 'multimedia formats'.

Definitions

1. According to Webster's Dictionary, "A method of communication in

cooperating a combination of media, such as audio, video, text, graphics and white boarding, perhaps on an interactive basis."

2. According to **Multimedia Dictionary**, "A combination of media as film, tape recording, slides and special lighting effects, used for entertainment or education; such as television, newspaper, advertising or publicity campaign."
3. According to **Dave Marshall**, "It is the field concerned with the computer-controlled integration of text, graphics, drawings, still and moving images (video), animation, audio and any other media where every type of information can be represented, stored, transmitted and processed digitally."

Importance of Multimedia in Today's Society and School or in Education

Multimedia is anything and everything that we watch and listen in a form of text, photograph, audio, video and many. It is used in business, schools, home public places and virtual reality. These have many functions to do many things and have made the things to become more mobile. It is a way of communication because that can be easy to communicate and understand what they say. After that multimedia has animation, music, video and more of this. This can be easier to attract people to listen what you are talking about. It also has let more interest to people listen and see when you present a product.

Now-a-days many schools are using multimedia resources in teaching. That can bring teaching and studying to the next level. In this, the schools are encouraging teacher to use multimedia in line with their teaching to create an interest for children. This allows the body absorb and retain information more easily associate, if they can stimulate all kinds of information. These resources can make technology to improve teaching and learning a language. Multimedia projects can provide a means of actively engaging students in the learning process. For example, students can work in groups to create a digital video project. The projects usually just only attract students to far more personal than writing a paper, even though they may actually work harder in the video project.

We know that technology has developed and advanced to a great extent. As a result of which the expectations of the corporate world is increasing in terms of ideas and concepts. In other words, students are trained to prepare presentations and even teachers impart lessons to the students for this purpose. Even in creative industries. Whether an educational industries such as advertisement, public relations, journalism and many more require this form of rich media. Film and entertainment firms make its extensive use for the purpose of entertaining their target audiences. Animated films are becoming more popular than even before. Engineering, Mathematical and scientific researches require simulation and modelling etc.

Advantages of Multimedia Resources

Multimedia is playing a significant role in today's era. The biggest advantage of multimedia is that it makes students to express and represent their prior knowledge and provides them with many learning opportunities. Multimedia brings forth students talent in various ways. The following advantages to Multimedia are :

1. It increases learning effectiveness.
2. Is more appealing over traditional lecture based learning method.

3. It offers significant potential in improving personal communication, education and training efforts.
4. Reduces training costs.
5. These are easy to use.
6. Tailors information to the individual.
7. It provides high-quality video images and audio.
8. Offers system portability.
9. Frees the teacher from routine tasks.
10. Gathers information about the study results of the students.
11. It is Entertaining as well as Educational.
12. Improves over Traditional Audio-Video presentations and enhancement of text only messages.

Disadvantages of Multimedia Resources

Multimedia teaching, sometimes, diverts students attention to the pictures, sounds or relevant material presented in Multimedia. Sometimes, excessive information about certain topic leads to cognitive overload and it becomes difficult for the students to understand all the information presented to them. It also creates problems for students if it is not used properly by the teachers who cannot handle it well. Sometimes the teachers focuses more on the creation on slides rather than the content. A complete reliance on the multimedia gives impression that the teacher has less understanding about the topic. The major disadvantage is the lack of professional development to help teachers using technology and multimedia to support effective learning and to fulfill learning requirement.

In conclusion, we can say that the disadvantages of multimedia resources are :

1. Expensive.
2. Not always easy to configure.
3. Requires special hardware.
4. Not always compatible.

MONITORING AND EVALUATION OF SCHOOLS

What is Monitoring and Evaluation? Discuss various methods of monitoring at school level.

OR

Explain the transparency and accountability role of state government in monitoring of schools.

Ans.

Meaning of Monitoring

Monitoring is the systematic and routine collection of information from projects and programmes for four main purposes.

1. To learn from experiences to improve practices and activities in the future.
2. To have internal and external accountability of the resources used and the results obtained;
3. To take informed decisions on the future of the initiative;
4. To promote empowerment of beneficiaries of the initiative.

Monitoring is a periodically recurring task already beginning the planning state of a project or programme. Monitoring allows results, processes and experiences

to be documented and used as a basis to steer decision-making and learning processes. Monitoring is checking progress against plans. The data acquired through monitoring is used for evaluation.

Meaning of Evaluation

Evaluation is assessing, as systematically and objectively as possible, a completed project or programme (or a phase of an ongoing project or programme that has been completed). Evaluations appraise data and information that inform strategic decisions, thus improving the project or programme in the future. Evaluation should help to draw conclusions about five main aspects of the intervention :

- (i) relevance
- (ii) effectiveness
- (iii) efficiency
- (iv) impact
- (v) sustainability

Information gathered in relation to these aspects during the monitoring process provides the basis for the evaluate analysis. In general, monitoring is integral to evaluation. During an evaluation, information from previous monitoring processes is used to understand the ways in which the project or programme developed and stimulated change. Monitoring focuses on the measurement of the following aspects of an intervention :

- On quality and quantity of the implemented activities (outputs what do we do? How do we manage our activities?)
- On processes inherent to a project or programme (outcomes : what were the effects/changes that occurred as a result of your intervention?)
- On processes external to an intervention (impact : which broader long term effects were triggered by the implemented activities in combination with other environmental factors?)

The evaluation process is an analysis or interpretation of the collected data which devices deeper into the relationships between the results of the project/ programme, the effects produced by the project/programme and the overall impact of the project/ programme.

Monitoring Methods

1. Verification and quality audit by external and independent institutions must be taken up at the Central, State and District Levels.
2. A Comprehensive Secondary Education Monitoring and Information System (SEMIS) will be developed by the Ministry of Human Resource Development to facilitate monitoring.
3. Field Visits, inspections and sample checks (internally and externally) must be undertaken on a regular basis to ensure comprehensive and continuous assessment of the scheme.
4. In addition, an online central monitoring and evaluation system will be evolved.

Transparency and Accountability role of State Governments

1. Right to Information and protective Disclosure.
- (i) The Right to Information Act should be followed both in letter and in spirit by all the implementing machinery of the Government Departments in all matters relating to RMSA.

- (ii) The School Display board has to show all investments being made in the school. Teacher attendance should be publicly displayed for improving the quality of school-level data regarding enrolment, attendance, retention drop out etc. besides the maintenance of another records and registers.

- (iii) Monthwise updated data on progress of each components of the scheme, progress of expenditure and utilization including funds received and spent, payments made, work sanctioned and works started, cost of works and details of expenditure on it, duration of work etc. should be made public in a pre-designed format outside all offices of all agencies involved in implementing the scheme. All these informations should also be shared with the Gram Panchayats/ULBs and should be discussed in their meetings.

- (iv) Similar efforts at transparency should be made right up to the national level.

2. **Physical Audit :** A physical Audit of the works undertaken will be conducted to verify the quality of works and to check that the expenditures incurred have led to the creation of durable assets.

3. **Vigilance and Monitoring :** The School Management Committee at school level will also act as be a local Vigilance and Monitoring Committee. The District Programme Coordinator will be responsible for ensuring local vigilance by involving PRIS and Parent Teachers Association. Besides, the state governments will also designate the state governments vigilance Departments to take preventive and remedial vigilance actions.

4. **Annual Reports :** The Central Government as well as the State Government shall prepare an Annual Report on the implementation of the scheme. This Report will be laid before Parliament and the state legislature by Central Government and State Government respectively.

5. Financial Audit

- (i) Financial Audit is mandatory. Each district must carry this out at the end of the financial year.
- (ii) The Accountant General will also conduct the Audit of Accounts of the scheme in addition to the audit conducted by the Chartered Accountants.
- (iii) The Audit Report of the Chartered Accountant and the Utilization Certificate for the previous year must be submitted latest by September next year by the District Programme Coordinator.
- (iv) The District Programme Coordinator will ensure that the opening and closing balance included in both the Audit Report and the Utilization Certificate tally.
- (v) A small team of District Internal Audit and Grievance cell in the office of the District Programme co-ordinator shall be constituted. This cell will scrutinize the reports/findings of the meetings of Panchayat/ULBs, complaints of irregularities-financial as well as others and conduct a special audit, if necessary.

6. **Citizen's Charter :** A model 'citizens' charter should be developed covering all aspects of the duties of panchayats and officials.

7. Grievance Redressal

- (i) The principal/vice principal will be the Grievance Redressal Officer at the school level and District Programme Coordinator at district level. A Grievance Register will be maintained in every school and office.

- (ii) Data generated by classifying petitions are to be analysed each month for region and type so that it becomes a tool for identifying areas that require senior management attention and redesigning of systems.
- (iii) All grievances will be disposed of within the time limit prescribed by the State Government. This PRIS will provide a forum for public hearings so that grievances may be quickly redressed.
- (iv) The State Government may designate an alternative Grievance Redressal Authority at the Block, District and State levels.
- (v) Action taken on the complaints received by the principal and district programme coordinator will be placed before the meetings of the Panchayats and the ULBs respectively.

PS : The scheme has undergone some modifications during the course of interministerial and other consultations.

Most of the changes have been covered/incorporated. However, in case of any variations, found later, shall be interpreted/corrected on the basis of the Cabinet Note and approval obtained.

Management of Data and Maintenance of Records

It is important to maintain accurate records of all aspects of implementation. The Right to Information Act, 2005, also requires this. The maintenance and timely updating of information will require a Comprehensive Computerized Secondary Education Monitoring and Information System (SEMIS). The State Missions will issue a comprehensive guideline for maintenance of records and reporting.

