

**P-1.1 & P-1.2**  
**PEDAGOGY OF COMMERCE**

**Course Content:**

**Unit-I: Introduction**

- a) Meaning, nature and scope of commerce. Correlation of commerce with economics, mathematics, social science and geography.
- b) Place of commerce in secondary school curriculum.
- c) Aims and objectives of teaching commerce with special reference to Blooms Taxonomy of educational objectives. Writing instructional objectives in behavioural terms.

**Unit –II: Methods and Techniques**

- a) Methods of teaching commerce: lecture cum demonstration method, discussion method and inductive deductive method.
- b) Survey and market studies, project method.
- c) Techniques of teaching commerce: Brain-storming, Assignment, simulation and role playing, Excursions and Field Trips.

**Unit III: Instructional Material and Evaluation**

- a) Instructional Material in Commerce- Concept and importance, Classification (Projected and non- projected material), Criterion for the selection of effective instructional material.
- b) Construction and uses of achievement tests, unit tests and objective based test items in commerce.
- c) Diagnostic tests: Concept and uses. Remedial teaching in commerce.

**Unit-IV: Professional Development of Teacher**

- a) Programmes for quality improvement in teaching of commerce- role of seminar, workshops and projects.
- b) Internship in Teaching Commerce: Concept and Importance

- c) Multimedia in learning commerce- Educational broadcasting, telecasting and videoconferencing.

## **UNIT-I: INTRODUCTION**

### **INTRODUCTION**

Commerce is a division of trade or production which deals with the exchange of goods and services from producer to final consumer. It comprises the trading of something of economic value such as goods, Services, information or money between two or more entities .commerce functions as the central mechanism which drives capitalism and certain other economic system (but compare command economy, for example).commercialization consist of the process of transforming something into a product, service or activity which one may then use in commerce.

### **MEANING AND NATURE OF COMMERCE**

Commerce is related with every industry, trade and business. While imparting commerce education one has to take into account globalization, liberalization, commercialization and competitive market. Today one has also to take into account information technology and internet services. New and useful courses, according to the market requirements have to be introduced. There has to be interaction between the industry and educational institutes. One has also to take into account that job opportunity are now almost negligible and students personalities have to be given to the students to develop attitude and personality needed to self-employment. An ingredient of consultancy services has also to be introduced in commerce education. Commerce education is an educational strategy and relates to real organizational problems. The important function of commerce education is analyzing and matching the role and the person, developing

equitableness and developing self reviewing capacity. Commerce education is helpful in every job. It is flexible, realistic and makes a person sensitive to the problems of his surrounding work environment. Commerce education enables a person to tackle crucial assignments.

**According to Leverett. S. Lyen,** He defined commerce education as “any education which a business man has and which makes him a better business man, is for him business education, no matter whether it was obtained in the walls of a school or not.”

**According to Paul. S. Lomare,** “Commercial education is fundamentally a programmers of economic education that has to do with the requirement, conservation and spending of wealth.”

**According to Fredrick G. Nichols,** “Commercial education is a type of training which while playing its part in the achievement of the general aims of education of any given level, has for its primary objective the preparation of people to enter upon a business career, or having entered upon such a career, to render more efficient service there in and to advance from their present levels of employment to higher levels.”

## **NATURE OF COMMERCE**

1. **Both Science as well as an Art:** Since we know that science is a systematic study or knowledge that tell the cause and effect relationship and ‘Art’ on the other side means expertise in applying the knowledge in real life situations to solve the problems. Therefore, like other sciences, the theories and principles of commerce, help in studying the cause and effect relationship in different business situations. Commerce education also plays vital role in the process of decision making which is most important aspect of Business world. On the other hand, a great level of expertise is required to

successfully apply the theories and principles in real life business situations and commerce education is essential for the same.

2. **Both academic discipline and vocational subject:** The commissioners for secondary education in Britain observed that, “All education is development and discipline of faculty by the communication of knowledge and whether the faculty may be eye or hand or the reason and imagination and whether the knowledge be so communicated as evoke and exercise a disciplined faculty, the process is rightly termed education. Therefore, commerce education is an academic discipline that not only in learning principle and postulates of business education but also greatly helps in professional preparation for a career of teaching. Moreover, commerce education should be made an essential part of course curriculum in school education so that every citizen could be able to better understand and use his business and economic surroundings.
3. **Both knowledge and a skill subject:** Since commerce is an academic discipline hence it serves as contemporary to higher education to enhance the knowledge regarding business education and on the other hand it is also a skill subject by which one can enter into the career of employment by rendering his acquired practical knowledge in real life situation.

### **SCOPE OF COMMERCE**

1. **Study of commerce education as a part of general education:** Scope of commerce as a part of general education implies the knowledge of commerce necessary for every citizen to successfully deal with commercial aspects and affairs of his social or day to day life. Therefore, under this sphere the commerce education should cover at least money and banking matters, budgeting, investment, insurance, communication, travel, record

keeping etc. and apart of this, minimum required commercial laws that are must to deal with daily activities like buying and selling, hire purchase and installment services, credit services, employment contracts, life insurance contracts, negotiable instruments etc. and some economic aspects like consumption of goods and services, demand, supply and price relationship, consumer surplus, national income and productivity.

- 2. Study of commerce education as a part of specialized study:** Scope of commerce as a part of specialized study covers the study of a very specialized curriculum which is must for the students to learn to acquire vocational competence and skill that can be applied in real business world for successful employment career.
- 3. Knowledge about background understanding of commerce:** Under this head it included the study of general commerce, economics, geography, commercial law, book keeping, business management, accountancy, advertising and salesmanship, Office practices etc. most of the topics included for study under this head serve to introduce the students to the activities of business enterprises and provide him material for discussion from the social points of views as also that of management.
- 4. Commerce study as specialized subject:** Under this head are included the topics such as book-keeping, type writing, shorthand, office practice, cooperative commerce education, distributive education and office occupation. Most of the topics included for study under this head are much which helps the students to gain specialized education for vocational competencies on different business jobs which are likely to be available to the commerce graduates.

## **HISTORY OF INDIA'S FREEDOM MOVEMENT IN COMMERCE**

Some commentators trace the origins of commerce to the very start of communication in prehistoric times. A part from traditional self-sufficiency, trading became a principal facility of prehistoric people, who bartered they had for goods and services from each other. Historian Peter Waston dates the history of long distances commerce from circa 150000 years ago.

In historic times, the introduction of currency as a standardized money facilitated a wider exchanges of goods and services. Numismatists have collection of these monies, which include coins from some Ancient World Large –scale societies, although initial usage involved unmarked lumps of precious metal. The circulation of a circulation of standardized currency provides the major advantages to commerce of overcoming the double coincidence of wants “ necessary for barter trades to occur. For example of a man who makes pots for a living needs a new house, he may wish to hire someone to build it for him. But he cannot make an equivalent number of pots to equal these services done for him, because even if the builder could build the house, the builder might not want the pots. Currency solve this problem by allowing a society as a whole to assign values and thus to collect goods and services effectively and to store them for later use, or to split them among several providers.

Today Commerce includes a complex system of companies that try to maximize their profits by offering products and services to the market (which consist both of individual and other companies) at the lowest production cost. There exists a system of international trade which some argue has gone too far.

## **CORRELATION OF COMMERCE WITH ECONOMICS, MATHEMATICS, GEOGRAPHY, SOCIAL SCIENCE.**

Correlation means mutual relationships of two or more persons/things but correlation in teaching indicates a technique which shows reciprocal relationships between the subjects of the curriculum for making knowledge concrete and permanent.

**Correlation of commerce with Economics:** various laws , principles and methods of economics are frequently employed in the study of commerce. The area of commerce includes all the activities concerned with the business. It include all those activities which help the producer of the product to send his goods in the hands of its customer through many channels i.e. bank, transportation advertisements , means of communication and storage etc.

**Correlation of commerce with Mathematics:-** The Knowledge of mathematics is applicable to the study of various laws and principles of commerce , because these laws principles are up to large extent , bases on mathematics calculations and statistically techniques . In commerce, calculation of Interest, mutual funds national income etc . have their roots in the branch of mathematics

### **IMPORTANCE OF COMMERCE IN DAILY LIFE.**

It is said that whole life is a big schooling. One is never too old to learn. What is necessary is the willingness to learn. All knowledge is possible through the two eyes - curiosity and desire. Knowledge is like a vast, unfathomable ocean.

Education may be liberal or it may be special. Now a days there are three faculties in higher education namely arts, commerce and science. Young people, now a days, are generally guided by lucrative aims. There main desire is to earn money and become rich. Very few aspire for knowledge for the sake of knowledge-the aim for the older generations. Business education offers good prospects for the

ambitious person. Many of them join commerce colleges or take admission in commerce with the aim of getting good jobs.

Economic activities and aims dominate the minds of modern men. Business, commerce and industries are important branches of economic activities. Industries are said to be the backbone of national economy. Trade or business follows the flag. The Englishmen came to India as traders and ultimately became the masters. Commerce is at the moment a promising subject as a whole. In the present day world, almost every human activity is related with economy, whether in the shape of trade and industry or commerce and banking. Any concern which has transaction of money, a commerce graduate has his footing there.

Secondly, the related fields of commerce are many and varied. Science, in spite of its expanding scope, is yet limited in providing jobs to the teeming millions. The scope of science is all the more limited in backward countries like Pakistan. The Humanities subjects are also not very promising from the profession point of view. Arts subjects appear to have lost their worth from earning point of view.

### **AIMS AND OBJECTIVES OF TEACHING COMMERCE**

Aim means purpose or intention and objective means thing aimed at or wished for. In simple words aims are broader targets and are general in nature and objectives are narrower but specific in nature. Aims include objectives and objectives help in achieving aims. In every sphere of human activity aims are fixed to carry out the task undertaken and accomplish the success.

**According to John Dewey,** "An aim is a foreseen end that gives direction to an activity and motivates behavior."

**According to Carter v. Good,** "Objective is desired change in behavior of pupil as a result of experience directed by school."

**According to B.S.Bloom,** "By educational objectives, we mean explicit formulation of the ways in which students are expected to be changed by educational process."

### **OBJECTIVES OF TEACHING COMMERCE AT SENIOR SECONDARY STAGE:**

1. To develop in the students an interest in the theory and practice in business, trade and industry.
2. To acquaint students with theoretical foundations and practices of organizing, managing and handling routine operations of a business firm.
3. To inculcate attitudes and values leading to the integration of business with the social system with a positive approach.
4. To enable the students to apply the principles and functions of management to specific aspects of business.
5. To equip the students with essential fundamental knowledge for setting up, organizing and handling routine operations of a small scale factory.
6. To equip the students with basic information on modern methods of office operations for effectively carrying out paper work in a business office.
7. To impart knowledge of methods considered useful in maintaining records of proprietary and partnership firm companies and non- trading organizations.
8. To generate and promote awareness of students in modern techniques of maintaining accounting records with the help of computers

9. To enable the students to analyze financial statements and interpret the results for decision making.
10. To acquaint the students with practice and procedure of determination of cost from the point of its elements.
11. To create an awareness of necessity of auditing the detection/rectification of errors/frauds in the process of accounting.
12. To develop students understanding of economic problems and their effects on society.
13. To promote understanding of the means of raising the standard of living.
14. To develop among student competence to settle as good office worker.
15. To promote understanding of the means of raising wealth for better living.
16. To promote understanding of means of raising opportunities of employment.

### **OBJECTIVES OF TEACHING COMMERCE ACCORDING TO BLOOM'S TAXONOMY OF EDUCATIONAL OBJECTIVES**

One of the most widely used ways of organizing levels of expertise is according to Bloom's Taxonomy of Educational Objectives. Bloom's Taxonomy uses a multi-tiered scale to express the level of expertise required to achieve each measurable student outcome. Organizing measurable student outcomes in this way will allow us to select appropriate classroom assessment techniques for the course.

One of the most important aspects of teaching learning process is the specification of instructional objectives. The over increasing aspects of various courses, services and activities in the secondary school make more emphasis on instructional objectives. Bloom and his associates in the university of Chicago, have produced a most important classification or taxonomy of cognitive objects, affective objectives and psychomotor objectives. In the cognitive domain, the teacher is interested in what will the students do in the affective domain the teacher is interested

additionally with what he goes to it or with it and conative domain concerns with how does he do it.

## **THE COGNITIVE DOMAIN**

It comprises the acquisition and manipulation of factual information. It is also concerned with intellectual skills and abilities of the students. There are several levels within cognitive domain that are very important for formation of instructional objectives in classroom teaching.

B.S. Bloom has divided the cognitive objectives into six categories as follows:

**KNOWLEDGE:** This is the first and lowest level of cognitive aspect. In this aspect the students are expected to recall information asked in the provided questions. They have to recognize information.

**COMPREHENSION:** This category also indicates the lowest level of understanding. It means the basic understanding of the facts, ideas, methods, processes and principles etc. It includes the three types of activities.

**APPLICATION:** The facts, principles, ideas, theories must be applied.

**ANALYSIS:** It includes divisions of contents into its elements and these are mutually related. It is of medium level.

**SYNTHESIS:** In this category all the elements are organized in such a way that they can form a unique whole. The elements are arranged and combined in such a way to form a pattern of structure not clearly observed before.

**EVALUATION:** It is the highest level of objectives of cognitive domain. It includes quantitative and qualitative judgment about the extent to which material and method satisfy criteria.

**TABLE 1: BLOOM'S TAXONOMY OF EDUCATIONAL OBJECTIVES FOR KNOWLEDGE-BASED GOALS**

<b>Level of Expertise</b>	<b>Description of Level</b>	<b>Example of Measurable Student Outcome</b>
<b>1. KNOWLEDGE</b>	Recall, or recognition of terms, ideas, procedure, theories, etc.	When is the first day of Spring?
<b>2. COMPREHENSION</b>	Translate, interpret, extrapolate, but not see full implications or transfer to other situations, closer to literal translation.	What does the summer solstice represent?
<b>3. APPLICATION</b>	Apply abstractions, general principles, or methods to specific concrete situations.	What would Earth's seasons be like if its orbit was perfectly circular?
<b>4. ANALYSIS</b>	Separation of a complex idea into its constituent parts and an understanding of organization and relationship between the parts. Includes realizing the distinction between	Why are seasons reversed in the southern hemisphere?

	hypothesis and fact as well as between relevant and extraneous variables.	
<b>5. SYNTHESIS</b>	Creative, mental construction of ideas and concepts from multiple sources to form complex ideas into a new, integrated, and meaningful pattern subject to given constraints.	If the longest day of the year is in June, why is the northern hemisphere hottest in August?
<b>6. EVALUATION</b>	To make a judgment of ideas or methods using external evidence or self-selected criteria substantiated by observations or informed rationalizations.	What would be the important variables for predicting seasons on a newly discovered planet?

## **AFFECTIVE DOMAIN**

Emotions, attitude, interests, feelings, values and morals exist and affect all human behavior. It is the school where various values and feelings of students are developed and shaped through engaging them in the several activities in the rich social environment of the school. It is the duty of the teacher to develop maximum affective domain of the pupils by effective objectives

### **1. RECEIVING**

This refers to the learner's sensitivity to the existence of stimuli – awareness, willingness to receive, or selected attention.

### **2. RESPONDING**

This refers to the learners' active attention to stimuli and his/her motivation to learn – acquiescence, willing responses, or feelings of satisfaction.

### **3. VALUING**

This refers to the learner's beliefs and attitudes of worth – acceptance, preference, or commitment. An acceptance, preference, or commitment to a value.

### **4. ORGANIZATION**

This refers to the learner's internalization of values and beliefs involving (1) the conceptualization of values; and (2) the organization of a value system. As values or beliefs become internalized, the learner organizes them according to priority.

### **5. CHARACTERIZATION**

The Internalization of values .This refers to the learner’s highest of internalization and relates to behavior that reflects (1) a generalized set of values; and (2) a characterization or aphilosophy about life. At this level the learner is capable of practicing and acting on their values or beliefs.

Table 2: Bloom's Taxonomy of Educational Objectives for Affective Goals

<b>Level of Expertise</b>	<b>Description of Level</b>	<b>Example of Measurable Student Outcome</b>
<b>RECEIVING</b>	Demonstrates a willingness to participate in the activity	When I'm in class I am attentive to the instructor, take notes, etc. I do not read the newspaper instead.
<b>RESPONDING</b>	Shows interest in the objects, phenomena, or activity by seeking it out or pursuing it for pleasure	I complete my homework and participate in class discussions.
<b>VALUING</b>	Internalizes an appreciation for (values) the objectives, phenomena, or activity	I seek out information in popular media related to my class.
<b>ORGANIZATION</b>	Begins to compare different values, and resolves conflicts between them to form an	Some of the ideas I've learned in my class differ from my previous beliefs. How do I resolve

	internally consistent system of values	this?
<b>Characterization By A Value Or Value Complex</b>	Adopts a long-term value system that is "pervasive, consistent, and predictable"	I've decided to take my family on a vacation to visit some of the places I learned about in my class.

### PSYCHOMOTOR DOMAIN

It is very important in taxonomy of educational objectives because motion is necessary condition of survival and of independence. Our lives require more physical strength. Intelligence also plays an important role in the life of an individual. The development of intelligence requires locomotors behavior. Walking and grasping are concerned with the training of the student's physical activities and the development of skills.

**Table 3: Bloom's Taxonomy of Educational Objectives for Skills-Based Goals**

<b>Level of Expertise</b>	<b>Description of Level</b>	<b>Example of Measurable Student Outcome</b>
<b>Perception</b>	Uses sensory cues to guide actions	Some of the colored samples you see will need dilution before you take their spectra. Using only observation, how will you decide which

		solutions might need to be diluted?
<b>Set</b>	Demonstrates a readiness to take action to perform the task or objective	Describe how you would go about taking the absorbance spectra of a sample of pigments?
<b>Guided Response</b>	Knows steps required to complete the task or objective	Determine the density of a group of sample metals with regular and irregular shapes.
<b>Mechanism</b>	Performs task or objective in a somewhat confident, proficient, and habitual manner	Using the procedure described below, determine the quantity of copper in your unknown ore. Report its mean value and standard deviation.
<b>Complex Overt Response</b>	Performs task or objective in a confident, proficient, and habitual manner	Use titration to determine the $K_a$ for an unknown weak acid.
<b>Adaptation</b>	Performs task or objective as above, but can also modify actions to account for new or problematic situations	You are performing titrations on a series of unknown acids and find a variety of problems with the resulting curves,

		e.g., only 3.0 ml of base is required for one acid while 75.0 ml is required in another. What can you do to get valid data for all the unknown acids?
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## **UNIT –II: METHODS AND TECHNIQUES**

### **METHODS OF TEACHING**

‘How TO TEACH is a really difficult problem for the teacher. Teaching, as it is generally said, is an art. Methods are the way. To understand and practice the art. ‘Why’ and ‘what’ of Commerce have so far been discussed, and this chapter deals with the ‘how’ of Commerce. “How to impart its knowledge? How to enable the child to learn, it” are the questions to be answered in this discussion. It is the final step of the execution of what we plan to teach in Commerce.

Different methods of teaching have been proposed or propounded by different educational thinkers or schools of thought in education. It is but desirable for the student to know about all of them, so that he can make a rational choice for himself. The knowledge of procedures, merits and demerits of all the methods will broaden the outlook of a would-be teacher. The choice for him is not to be made narrow. It should be then left for him to decide from his wide information, which of the methods to use and when.

### **LECTURE METHOD**

Simply stated lecture method means 'teaching through lecture'. In this method the teacher tries to explain the subject matter in a simple and understandable language. He neither makes use of a text book nor of any other method. The teacher prepares his lecture. Teacher who use this method always have in mind what they have to teach and how. They try to present the subject matter in such a way that the students may understand it. So the formal lecture given by the teacher to teach the subject matter is known as Lecture Method. Sometimes the teacher makes use of Audio visual aids to elucidate his lecture. Lecture Method is time honored device for imparting knowledge. This method involves teaching by means of spoken words. Traditionally it is considered equivalent to formal talk by the teacher.

The lecture method of teaching needs to be very flexible since it may be used in different ways. For example, there are several types of lectures such as the illustrated talk where the speaker relies heavily on visual aids to convey ideas to the listeners. With a briefing, the speaker presents a concise array of facts to the listeners who normally do not expect elaboration of supporting material. During a formal lecture, the speaker's purpose is to inform, to persuade, or to entertain with little or no verbal participation by the students. When using a teaching lecture, the instructor plans and delivers an oral presentation in a manner that allows some participation by the students and helps direct them toward the desired learning outcomes.

According to Thomas, M. Risk – “The lecture is an exposition of facts, principles or other relationship that the teacher wishes his listener to understand.”

## **PURPOSE OF LECTURE METHOD**

- 1. MOTIVATIONAL PURPOSE:** By presenting the outstanding aspects of the lesson by means of appropriate questioning and audio visual aids, the lecture method can be used to motivate the learners.
- 2. CLARIFICATION PURPOSE:** The lecture may be used to clarify a common difficulty faced by the students. It may review, present a new interpretation or establish a new association, to clarify their common difficulties with regard to the contents which are being explained.
- 3. REVIEW PURPOSE:** By summarizing the main points of his topic, a lecturer can also present a profitable review of his lecture to benefit his students.
- 4. EXPANDING CONTENTS:** Another important purpose of lecture method is to present additional materials and detail. The teacher can expand the detail. But he must relate the new information to the content of the prescribed text.

### **MAIN PRINCIPLE OF LECTURE METHOD**

- 1. TO MOTIVATE:** This method can be very profitable used for motivating or stimulating the students. When a new topic or unit is introduced in the class, the students can be motivated by the teacher by presenting the outstanding aspects of the events or movements in a very simple and interesting style.
- 2. TO CLARIFY CONCEPTS:** Every lesson has certain aspects which majority of the students does not understand easily. Similarly a lesson can have some technical words which are not intelligible to the students. The teacher can clarify all these principles or technical words etc through a lecture. It can in this way save the valuable time of both the teacher and students.
- 3. TO REVIEW:** The teacher can guide the students by giving the main points of a chapter and review the subject.

4. **TO SUMMARIZE:** When the topic is very comprehensive, the students find it very different to comprehend the lesson. Therefore, it becomes necessary that the whole lesson should be presented to the students in a summary form.
5. **TO EXPAND CONTENTS:** Lecture method can supplement the knowledge of the pupil. If the students want something additional from what they have studied from a text book. Lecture method is the best under such situation.
6. **TO SAVE TIME:** Learning through text book comparatively takes longer time than through lecture method. Something there can arise occasions when saving of time becomes very important. Lecture method, in this way, can save the time of the students.
7. **PREPARING THE STUDENTS TO UNDERTAKE PROJECTS OR ACTIVITIES:** Psychological researches have proved that the child learns better through undertaking certain projects and activities. An informal lecture is very useful for preparing the students to undertake an assignment, a project or an activity.
8. **TO GIVE ASSIGNMENT:** After every lesson, home task is given to the students.

#### **MERITS OF LECTURE METHOD**

1. **IT IS A GOOD MEANS OF STIMULATING THE STUDENTS:** A teacher can make the lesson interesting through good lecture. A teacher can bring life into his lecture by his sincere preparation of the lesson. His interest can stimulate good students.
2. **IT CAN GIVE EFFECTIVE INTERPRETATION OF CONTEMPORARY EVENTS:** Such interpretation is not possible in the books; those events can be elucidating only by the lecture of the teacher.
3. **DIRECT CONTACT WITH THE STUDENTS:** It is only through lecture method that a teacher can come in direct contact with the students. If he is an alert

teacher, he can very well know whether the students are understanding well of what he is talking. If a student does not follow anything in the lecture of a teacher, he can at once bring it to the notice of the teacher.

4. **GOOD LECTURES STIMULATE BRIGHTER PUPILS:** They are promoted to put in more work.
5. **PROVIDE KNOWLEDGE ABOUT SUPPLEMENTARY MATERIAL:**  
Sometimes the teacher has to provide information to the about some supplementary material like newspaper, magazines, pictures and article etc over and above to what is written in the books.
6. **DIFFICULT TOPICS CAN BE MADE MORE INTELLIGIBLE:** There are certain topics in Social Studies which can by no means be called easy ones. A normal student with average intelligence cannot comprehend them only with the help of textbooks.
7. **LECTURE PREPARES THE STUDENTS TO UNDERTAKE AN ASSIGNMENT A PROJECT OR AN ACTIVITY AS A PART OF HOME WORK:** Before giving home work to the students in any form, it is always advisable to give them an information talk. It will save a lot of time of the students. They will come to know what exactly they are to do.
8. **GOOD TRAINING AND EXPERIENCE IN LEARNING BY HEARING:**  
When students listen to a lecture, they get useful experience in listening. It prepares them for successful adult life because in adult life there is lot of importance of listening experience. The students get a lot of practice of how to listen attentively and take notes.
9. **A BASE FOR OTHER METHOD:** The teacher may adopt any method but he will introduce it only with the help of a teacher.
10. **ENOUGH SCOPE FOR MODIFICATION AND REPETITION:** It is possible that during the delivery of the lecture a teacher may realize that whatever he is

talking is not being followed by the students. Even the blank facial expression of students can betray them. At such occasions the teacher can modify, repeat or reframe his ideas so that the lecture may become more intelligible.

11. **SPOKEN SCOPE IS MORE EFFECTIVE THAN PRINTED ONES:** It is because spoken words have more vividness and clarity than printed words.
12. **USEFUL FOR FACTUAL INFORMATION:** Factual information and historical anecdotes can be easily imparted by this method. The interesting life histories of the great people like adventurers, experimenters, investigator and thinkers as well as philosopher can be imparted effectively through this procedure.
13. **ECONOMICAL:** Lecture method is very economical because it can be applied easily at higher grade classes where sizes of the classes are very large in number. In this way it is applicable in Indian situation where the size of the class is big.
14. **EFFECTIVENESS OF SPOKEN WORD:** Spoken word is frequently more effective than a printed one. While lecturing, the teacher can indicate by his tone, gesture and facial expression the exact sense or meaning which he wishes to convey.
15. **OPPORTUNITY FOR CLARIFICATION:** Lecture method provides opportunity for clarification. When the teacher lectures, he is in immediate contact with the students.
16. **DEVELOPMENT OF SKILLS:** Lecture method gives students good training and experience in development of certain skills like learning by hearing, writing while taking notes, and those of attending the auditory and visual presentation.
17. **MEANS OF STIMULATING:** A good lecture serves as a pattern of good oral expression, which may tend to counteract careless, incorrect speech of the students. It lecturers stimulate good orator.

18. **MEANS OF SUPPLEMENTING:** Lecture method supplements practically various devices and methods of teaching like question answer technique, discussion method and project method.
19. **PUPIL-CENTERED:** A lecture can be adapted to the abilities, interest, previous knowledge and needs of the students. It can be organized in accordance with the principles of child psychology and educational psychology rather than the logical organization of the text book material.
20. **ACHIEVEMENT OF THE OBJECTIVES:** Very high order of cognitive objectives can be achieved.
21. **PERSONAL CONTACT:** Lecture method brings a personal contact and touch to impress or influence the students.
22. **PREVIOUS KNOWLEDGE AND CO-RELATION:** Lecture methods enable the linkage of previous knowledge with the new one and provide opportunities of co-relating events and objects.
23. **CLARIFICATION:** Lecture method provides large scope for clarification and of laying stress on significant ideas.

### **DISADVANTAGES OF LECTURE METHOD**

1. **MAKES THE STUDENTS PASSIVE:** In this method, students become passive listeners. Nowadays an effective method is that which involves the student's participation. Social Studies is based on analytical and practical aspects in respect to Geography and Economics etc. But the actual situation is that during the period, students have nothing to do but to listen to the lecture of the teacher. Most of the time their attention wanders from the main topic during the lesson.
2. **NOT SUITABLE FOR ALL TYPES OF TEACHERS:** This method cannot be used effectively by all types of teachers. Many teachers do not know how to lecture in an effective way.

3. **ITS EXTENSIVE USE IS HARMFUL:** An extensive use of this method tends to substitute the teacher for the pupil. If the teacher falls in the habit of giving frequent lecture, he probably secure valuable experience, but in the meantime, the pupils are deprived of their chance to similar experience.
4. **LESSONS BECOME DULL AND DRY:** Lecture method is generally monotonous and dull. If lecture method is not supplemented with other methods, there is a danger of its becoming dull, monotonous and dry.
5. **HEAVY TEACHING LOAD ON TEACHERS:** Naturally a teacher is not expected to lecture in each period. He will have neither the capacity to prepare so many simple and interesting lectures each day, nor will it be physically possible for him to speak continuously for hours together each day.
6. **UNPSYCHOLOGICAL:** The child is active by nature. He wants learning by doing. Lecture method is only learning by knowing. Therefore, it is not in accordance with the nature of the child.
7. **SPOON FEEDING:** Lecture method does not encourage independent thinking, discovering, exploring and taking initiative. It is type of spoon feeding and all the traits of child's personality are not allowed to develop.
8. **AUTHORITARIAN:** This method is undemocratic, rather it is authoritarian. The pupils are encouraged to depend upon one authority i.e. teacher. They are not capable to challenge the verdict of the teacher.
9. **MEMORY BASED:** Lecture method lays too much stress on memory work. Experimental work is ignored and the power of observation of a child is seldom exercised.
10. **LESS APPLICABLE:** It is not applicable for junior classes because the mental level at that stage is not so developed that they become capable to understand the teacher. Also it is applicable to teach every topic because some topics are easy and some are difficult.

## **DISCUSSION METHOD**

Wherever there is democracy, there is bound to be discussion. In an authoritarian the dictator expects from the people 'Blind obedience to the dictates of the state'. The slogan of Hitler was "Do and Die and never ask why". Discussion has now come to challenge the authoritarian methods through which education was imparted in the old days. In those days teacher's authority was accepted in all matters. The pupil had little say in educational programmes. but such a method had to be changed due to changed socio political conditions. The present age is the age of discussion so, this method find equally important place in education. This elaborated, explains, or expanded on through interactions both among the trainees and between the trainer and the trainees. The interaction and the communication between these two make it much more effective and powerful than the lecture method. If the Discussion method is used with proper sequence i.e. lectures, followed by discussion and questioning, can achieve higher level knowledge objectives, such as problem solving and principle learning.

The Discussion method consists a two-way flow of communication i.e. knowledge in the form of lecture is communicated to trainees, and then understanding is conveyed back by trainees to trainer. Understanding is conveyed in the form of verbal and non-verbal feedback that enables the trainer to determine whether the material is understood. If yes, then definitely it would help out the trainees to implement it at their workplaces and if not, the trainer may need to spend more time on that particular area by presenting the information again in a different manner.

According to Simpson and yokam, "Discussion is a special form of conversation. It is an exchange of ideas of a more reasoned detailed kind than that found in

ordinary conversation and generally involves the conversation of important ideas and issues."

According to James M. Lee, "It is an educational group activity in which the teacher and the students talk over some problem or topic."

According to T.M.Risk, "Discussion means thought consideration of the relationship involves in the topic under study."



## **CHARACTERISTICS OF THE DISCUSSION METHOD**

### **1. EXPERIENTIAL LEARNING**

We learn best when we are actively involved in the learning process using the discussion method, a student's concrete, personal experiences are followed by observation, reflection, and analysis of these experiences. This process leads to formulation of abstract concepts and generalizations, which, in turn, leads to hypotheses to be discussed and tested in future experiences.

### **2. EMPHASIS ON STUDENTS**

Students' experiences serve as the basis for the discussion. Although the teacher must have a specific goal in mind and a general framework for reaching the goal, student input determines the specific direction the discussion takes.

### **3. FOCUS ON CRITICAL THINKING**

Developing critical thinking skills involves consideration of three areas: Instructional design, a focus on learning by doing, and strategic teaching.

### **4. THOUGHTFUL CONSIDERATION OF RELATIONSHIP**

While discussing the different aspects of a problem are discussed. They analyse, compare and evaluate the problem and make a conclusion.

### **5. Principle of learning**

Discussion method is based on principle of learning like principle of active participation, principle of freedom for work, principle of equal opportunity.

## **CONSTITUENTS OF DISCUSSION METHOD**

1. **Leader:** teacher is the leader of the discussion. he will have to do a lot of things to perform well his role of a leader. For example for organising a discussion he will have to study a lot, make elaborate preparations and planning.

2. **THE GROUP:** In this classification come the students. The group is composed of students with different level of intelligence, taste and temperaments. Some are very shy and shirkers while others are full of initiative. The teacher's duty is to encourage every student to participate in the discussion.

3. **THE PROBLEM:** The problem selected for discussion must be according to the age, stage, capacities and potentialities of the students. the problem of discussion must be one which the students feel as their own. It should never be beyond their grasp. The problem should not be

- vague. It must be real and functional. The teacher should select the problem consulting the students and knowing their opinion.
4. **CONTENT:** The subject matter of discussion is content. It consists of the body of knowledge and needed material of study. In a discussion of social studies, content consists of textbook, reference books and audio visual aids.
  5. **EVALUATION:** After the discussion has taken place, it should be evaluated. The barometer of success or failure of discussion is whether it has succeeded in bringing about desirable change in the ideas, attitudes and behaviour patterns of the students or not, whether it has led to increase in their knowledge or not.
    1. not know, what he has overlooked and wherein he is mistaken. Both as to the facts and methods of interpreting them.
    2. **Testing of understanding of concepts:** During the discussion, pupils are able to test their own understanding of concepts and principles. This helps them to take correction actions at an early age.
    3. **No rote learning:** True knowledge is attained by the students only through discussion. There is no rote learning here. All the students are at liberty to give their argument and these will be listened to by all others. Such knowledge as solid, stable, concrete and everlasting.
    4. **It is a psychological method:** In this method the children's needs, abilities and mental capacities are kept in mind and the topics or problems of discussion are selected accordingly. Children are given enough. These methods discourage cramming: Sometimes it is charged that social studies encourages cramming.

## **MERITS OF DISCUSSION METHOD**

- 1. CLARIFICATION:** Discussion helps in clarification of the concept. New concept generates instead of old ones.
- 2. DEVELOPMENT OF THE POWER OF CRITICAL THINKING AND RATIONAL JUDGEMENT:** The teacher cannot afford to think students to be only dumb driven cattle and thrust knowledge right into their throats without letting them think and judge.
- 3. ENCOURAGE THE STUDENTS TO EXPRESS THEIR OPINION IN GROUP:** Some students are very shy in nature. In large sized classes they do not answer. But as discussion takes place in small groups, such students can dare to express their opinion and feel a sense of security. they are also amendable to change their opinions when they do not find them tenable during discussion.
- 4. COLLECTIVE DECISION MAKING:** In a classroom discussion, the decision is reached after mutual consultation. It is collective decision with minimum dissent.
- 5. DEVELOPMENT OF TOLERATION:** In a classroom discussion, students have to listen to argument contrary to their beliefs. They are expected to remain tolerant and not to get agitated. Change is to be brought about through the weight of arguments. Such an attitude is very essential for making democracy a success.
- 6. DISCOVERY OF KNOWN:** Discussion helps the students in discovering what he did is not the fault of social studies but its method of teaching. If discussion method is used, we can be saved from this defect. In this method, the students themselves find out the facts, analyse them and seek removal of doubts.

## **DEMERITS OF DISCUSSION METHOD**

1. **Not suitable for all topics:** Discussion method is not suitable for all topic. some topics cannot be teach by this method.
2. **Not suitable for students:** students can face various kinds of problems in gathering the information relating from various sources if teacher is not alert and does not take heed in executing his responsibilities properly.
3. **Dominated by some intelligent students:** As level of mental capabilities of students is found to be different in the same class, as a result of which sometimes it is found that group discussion gets dominated by only some students,-who are more intelligent and possess the confidence to explain their views and ideas.
4. **Indiscipline:** If there is lack of proper supervision on the discussion than situation of indiscipline can be arise in the classroom.

## **LECTURE-CUM-DEMONSTRATION METHOD,**

**Introduction** : This method is also called as **Demonstration method**. The main drawback with the lecture method is that it is one sided process. The teacher talks too much and the students are totally neglected. The best method is that which involves a kind of ebb and flow b/w the teacher and taught, where the teacher and the children are really part of an educative process. It is in an atmosphere of this kind that children develop in the best way. The demonstration method takes stock of this fact and thus while in a lecture method the teacher merely talks.

**Meaning** : Demonstration means ‘to show’. In the lecture method teacher just tells but in the demonstration method he also shows and illustrates certain fundamental phenomena and the various applications of abstract principles through a series of

experiments. This method is also in accordance with the maxims of teaching “**from concrete to Abstract.**” The students see the actual apparatus and experiment and thereby they feel interested in learning.

### **Characteristics of Good Demonstration :**

1. **Visibility** : A demonstration should be visible in most of its significant details to all the students of the class.
2. **One major idea at a time** : Only one major idea at a time should be taken so that students become aware of the objectives of demonstration.
3. **Clear Cut** : The demonstration should be clear cut, for this, the teacher should be clear of the purpose of demonstration. He should know the aims of demonstration before hand.
4. **Convincing** : It should be convincing so that students get a training in scientific method of solving problem.
5. **Rehearsal** : It is necessary before demonstration so that teacher becomes well versed in handling the apparatus.
6. **Supplemented with other teaching aids** : Demonstration should be supplemented with other teaching aids like charts, models etc. to make it more interesting.
7. **Asking relevant questions** : The teacher should ask suitable and relevant reflective type questions. It also helps to keep the students alert.
8. **Neat, Clean & Tidiness** : The teacher should see the general order, neatness, cleanliness and tidiness of the demonstration table. The table

should be occupied by the apparatus and materials relevant to the lesson. It is always better to keep the used apparatus right hand side and the apparatus to be used on left hand side.

**Sequence of Experiments** : The teacher should carry out the experiments in such a way that the students should learn how to carry it out by themselves.

10. **Simple & Speedy** : Demonstration should be simple and speedy.
11. **Acc. to time and season** : While planning and performing the demonstration, it should be kept in mind that the demonstration should be in accordance with the time and season otherwise it will prove to a failure and wastage of time.
12. **To Write Observation** : The students should be asked to draw diagrams and to write, what they observe.
13. **Black Board** : The blackboard behind the demonstration table helps the teacher to summarise the principles and concepts related and also the student to note it down.
14. **Sufficient time** : For recording data, the students should be give sufficient time.
15. **Apparatus** : The apparatus used for demonstration should be larger in size.
16. **Teacher to act as performer** : For maintaining the interest of the students sometimes the teacher act as a performer, showman or actor.
17. **Spare parts for the apparatus** : Reserve or spare parts for the apparatus should be there on the table.

### **Common Errors in a Demonstration lessons :**

1. The demonstration may not to be visible to all.
2. The set up of apparatus may not be at a good height.
3. The lighting and ventilation may not be adequate.

The speed of demonstration may not be accurate, either too fast or too slow.

5. The apparatus may not be ready to use.
6. Students are not involved.
7. The purpose of demonstration may not be clear.
8. The teacher may arrive at the generalization himself without getting it done by the students.
9. The students may not be given sufficient time.
10. The apparatus may not be arranged in proper order and the teacher may flounder while performing the experiment.

### **Conduct of Lecture-cum-Demonstration**

1. **Planning & Preparation** : While planning a demonstration the following points should be kept in a mind.
  - a) **Subject matter** : The subject matter should be thoroughly prepared. If the teacher knows it, even then he should go through the subject matter.

- b) **Lesson Planning** : The teacher should plan how to introduce the lesson, the way to present it, types of questions to be asked in experimentation and recapitulation.
- c) **Rehearsal of experiment** : The demonstration should be rehearsal well in advance as it provides confidence to the teacher too. In this way, his lesson will go on smoothly and systematically.
- d) **Collection and arrangement of apparatus** : The apparatus and chemicals should be properly arranged on the demonstration table. Only such materials should be pro kept on the table as are required for **Introduction of Lesson** :  
The lesson may be introduced on the following basis :

- a) Student's personal experience or incident.
- b) Student's environment
- c) Telling story
- d) A simple and interesting experiment.

### 3. **Presentation of the subject matter** :

- a) The teacher must study the subject matter on broad basis taking into consideration the interest and experience of students.
- b) While demonstration is going on, questions should also be asked which helps the students to understand the underlying principles.
- c) The teacher should try to illustrate the facts and principles. the experiment in progress. b/z too many things at a time divert the attention of students.

d) Language used by teacher should be simple and clear.

4. **Experimentation**

a) Demonstration should be properly spaced and striking, clear and convincing.

b) The demonstration table should have only apparatus related to the lesson.

c) The experiment should be simple and speedy.

d) All the apparatus should not be displayed at once.

e) Reserve or spare apparatus can be kept for emergency.

5. **Black board work** : A big black board behind the demonstration table is necessary in order to summarise the principles and other matters of demonstration and also to draw necessary diagrams and sketches.

**Advantages**

1. **Economical** : This method is economical as it helps in economizing resources. Some equipments are too expensive for general use and thus demonstrating the experiment to the whole class becomes an economical exercise.

2. **Psychological Method** : Demonstration method is psychological as the students are shown concrete things. They have not to enter into false imagination.

3. **Student participation** : This is one of the best techniques to get participation of students.

4. **Save time & effort** : This method saves teacher's time and effort as it is easier to perform one experiment than to supervise 45 experiments.
5. **Helpful to promote useful discussion** : This method can help to promote relevant and useful discussion in the classroom and also provides opportunity to question and to review.
6. **More efficient method** : Discussion method is more efficient than laboratory method as a teacher is more competent to handle apparatus than students.
7. **Activity Centred** : By this methods students are kept busy in various activities like observing, taking notes, answering questions, drawing diagrams etc.
8. **Useful for all types of students** : This method is suitable for all types of students i.e. from average to above average.

**Helpful for teacher** : This method is useful and helpful for teacher also he can be in position to explain each and every step and to ensure that all the students see and interpret all the work in uniform manner.

### **Disadvantages**

1. **Ignore maxim of education** : The maxim of education "Learning by Doing" and the principle of psychology of learning has no place in this method. The students don't get chance to perform experiment themselves.
2. **Visibility** : It is main problem for a teacher b/z all the students may not be able to see the details and results of a demonstration.

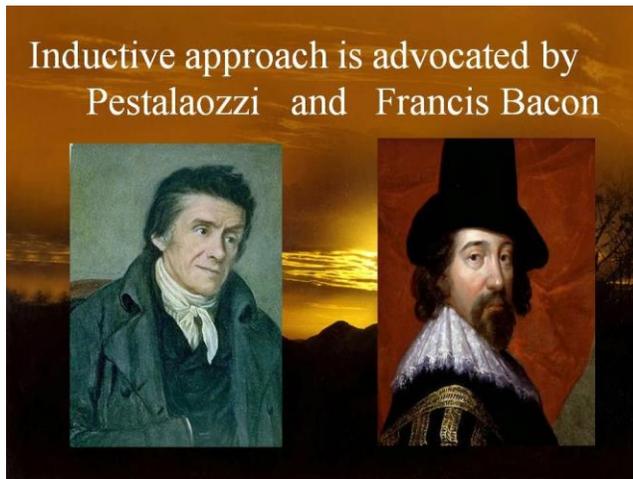
3. **Speed of Experiment** : Either too fast or too slow speed of demonstration some times may create trouble in understanding what is going on.
4. **Ignore individual difference** : This method totally ignores the main principle of psychology ‘there is always individual difference’ slow learners and genius are made to sail in the same boat.
5. **Hinder progress** : This method some how hinder the development of laboratory skills among the students.
6. **Not useful for developing scientific attitude** : This method does n’t help the students for inculcation of scientific attitude.
7. **Problem of indiscipline** : Some time students may get into mischief, thereby creating a problem of indiscipline.

## **INDUCTIVE DEDUCTIVE METHOD,**

### **INDUCTIVE METHODS:**

It leads from concrete to abstract, particular to general and from examples to formula. It is the method of constructing a formula with the help of a sufficient number of concrete examples. It is based on induction which means proving a universal truth by showing that if it is true for a particular case and is further true for a reasonably adequate number of cases, it is true for all such cases. A formula or generalisation is thus arrived at through a convincing process of reasoning and solving of problems. After a number of concrete cases have been understood, the student successfully attempts the generalisation.

## INDUCTIVE METHOD



- Inductive approach is advocated by Pestalozzi and Francis Bacon
- Inductive approach is based on the process of induction.
- In this we first take a few examples and greater than generalize.
- It is a method of constructing a formula with the help of a sufficient number of concrete examples. Induction means to provide a universal truth by showing, that if it is true for a particular case. It is true for all such cases. Inductive approach is psychological in nature.
- The children follow the subject matter with great interest and understanding. This method is more useful in arithmetic teaching and learning.

Inductive approach proceeds from

- Particular cases to general rules of formulae
- Concrete instance to abstract rules
- Known to unknown
- Simple to complex

Following steps are used while teaching by this method:-

***(a) Presentation of Examples***

In this step teacher presents many examples of same type and solutions of those specific examples are obtained with the help of the student.

***(b) Observation***

After getting the solution, the students observe these and try to reach to some conclusion.

***(c) Generalization***

After observation the examples presented, the teacher and children decide some common formulae, principle or law by logical mutual discussion.

***(d) Testing and verification***

After deciding some common formula, principle or law, children test and verify the law with the help of other examples. In this way children logically attain the knowledge of inductive method by following above given steps.



*(b) Observation*



*(c) Generalization*



*(d) Testing and verification*





### **Applicability of inductive method**

Inductive approach is most suitable where

- Rules are to be formulated
- Definitions are to be formulated
- Formulae are to be derived
- Generalizations or law are to be arrived at.

### **MERITS OF THE INDUCTIVE METHOD**

1. It helps understanding. It is easy to understand a mathematical principle established through a number of simple examples. Any doubts about the “how and why” of a formula are clarified in the very beginning.
2. It is a logical method. So it suits mathematics.
3. It gives the opportunity of active participation to students in the discovery of formula.
4. It is based on actual observation, thinking and experimentation.
5. It curbs the tendency to learn things by rote, and also reduces home work.
6. As it gives freedom from doubts, and helps in understanding, it suits the child.

### **DRAWBACKS OF THE INDUCTIVE METHOD:**

1. It is limited in range. It contains the process of discovering the formula with the help of a sufficient number of cases, but “what next?”. is not provided in it. The discovery of a formula does not complete the study of the topic. A lot of supplementary work and practice is needed to fix the topic in the mind of the learner.

2. Inductive reasoning is not absolutely conclusive. Three or four cases are picked up to generalise an observation. Therefore the process Establishes a certain degree of probability which can, of course, increased and made more valid by increasing the number of cases.

3. It is likely to be more laborious and time consuming.

4. At the advanced stage, it is not as useful as some of the unnecessary details and explanations may make teaching dull and boring.

5. Its application has to be restricted and confined to understanding of rules in the early stage. Once a formula has been established, time should not be wasted in rediscovering it for every subsequent problem.

### **DEDUCTIVE METHOD:**

It is the opposite of Inductive Method. Here the learner proceeds from general to particular, abstract to concrete, and formula to examples. A pre constructed formula is told to the students and they are asked to solve the relevant problems with the help of that formula. The formula is accepted by the learners as a pre-established and well-established truth.

- Deductive method is based on deduction.
- In this approach we proceed from general to particular and from abstract and concrete.
- At first the rules are given and then students are asked to apply these rules to solve more problems.



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**Deductive approach proceeds from**

- General rule to specific instances
- Unknown to know
- Abstract rule to concrete instance
- Complex to simple

Deductive method is based on deduction. In this approach we proceed from general to particular and from abstract and concrete. At first the rules are given and then students are asked to apply these rules to solve more problems. This approach is mainly used in Algebra, Geometry and Trigonometry because different relations, laws and formulae are used in these sub branches of mathematics. In this approach, help is taken from assumptions, postulates and axioms of mathematics. It is used for teaching mathematics in higher classes.

Deductive approach proceeds form

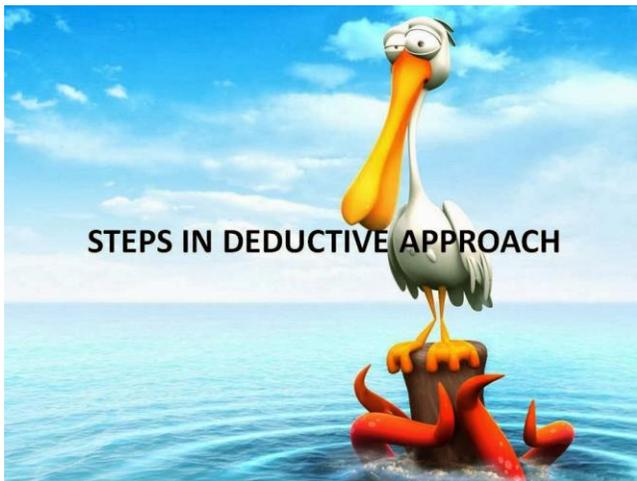
- General rule to specific instances

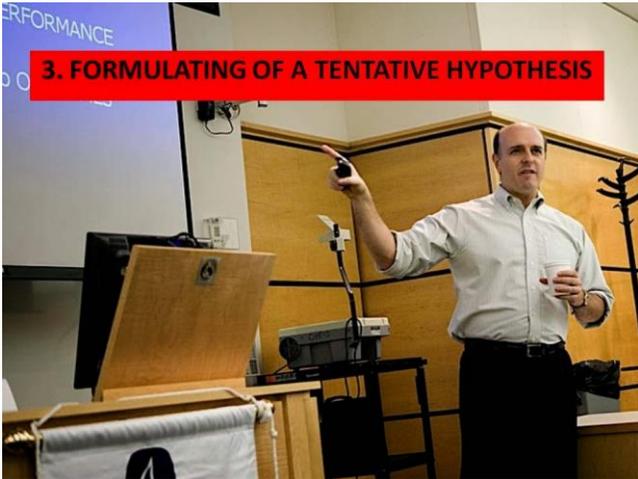
- Unknown to know
- Abstract rule to concrete instance
- Complex to simple

### **Steps in deductive approach**

Deductive approach of teaching follows the steps given below for effective teaching

- Clear recognition of the problem
- Search for a tentative hypothesis
- Formulating of a tentative hypothesis
- Verification





## **MERITS OF THE DEDUCTIVE METHOD:**

1. It is short and time-saving. The solving of problems by predetermined formulae takes little time. Authors and teachers, therefore like to adopt it (give it preference over others).
2. It glorifies memory, as students have to memorise a considerable number of formulae.
3. At the “practice and revision” stage, this method is adequate and advantageous.
4. It combines with the inductive method to remove the incompleteness and inadequacy of the later.
5. It enhances speed and efficiency in solving problems.

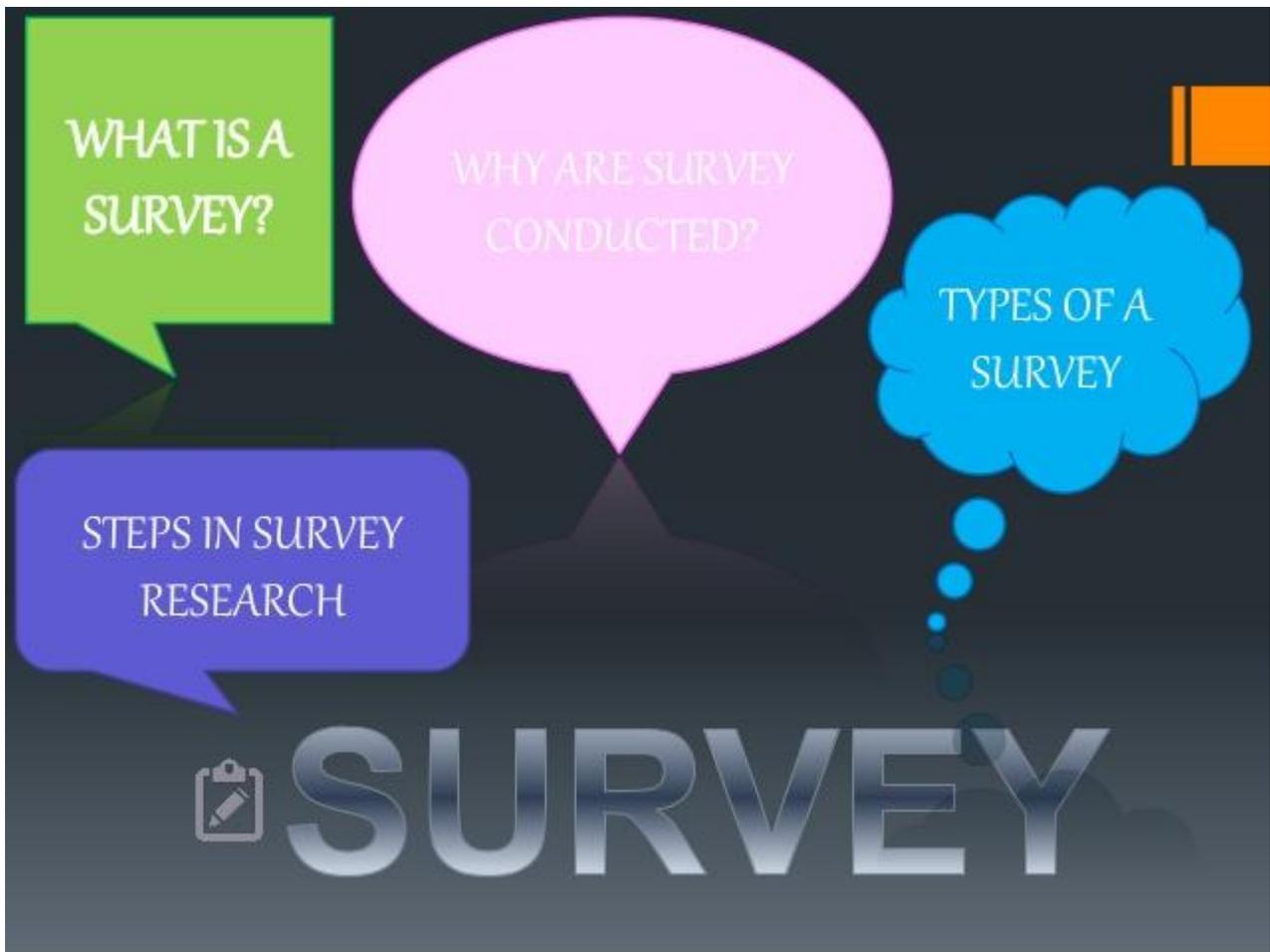
## **DRAWBACKS**

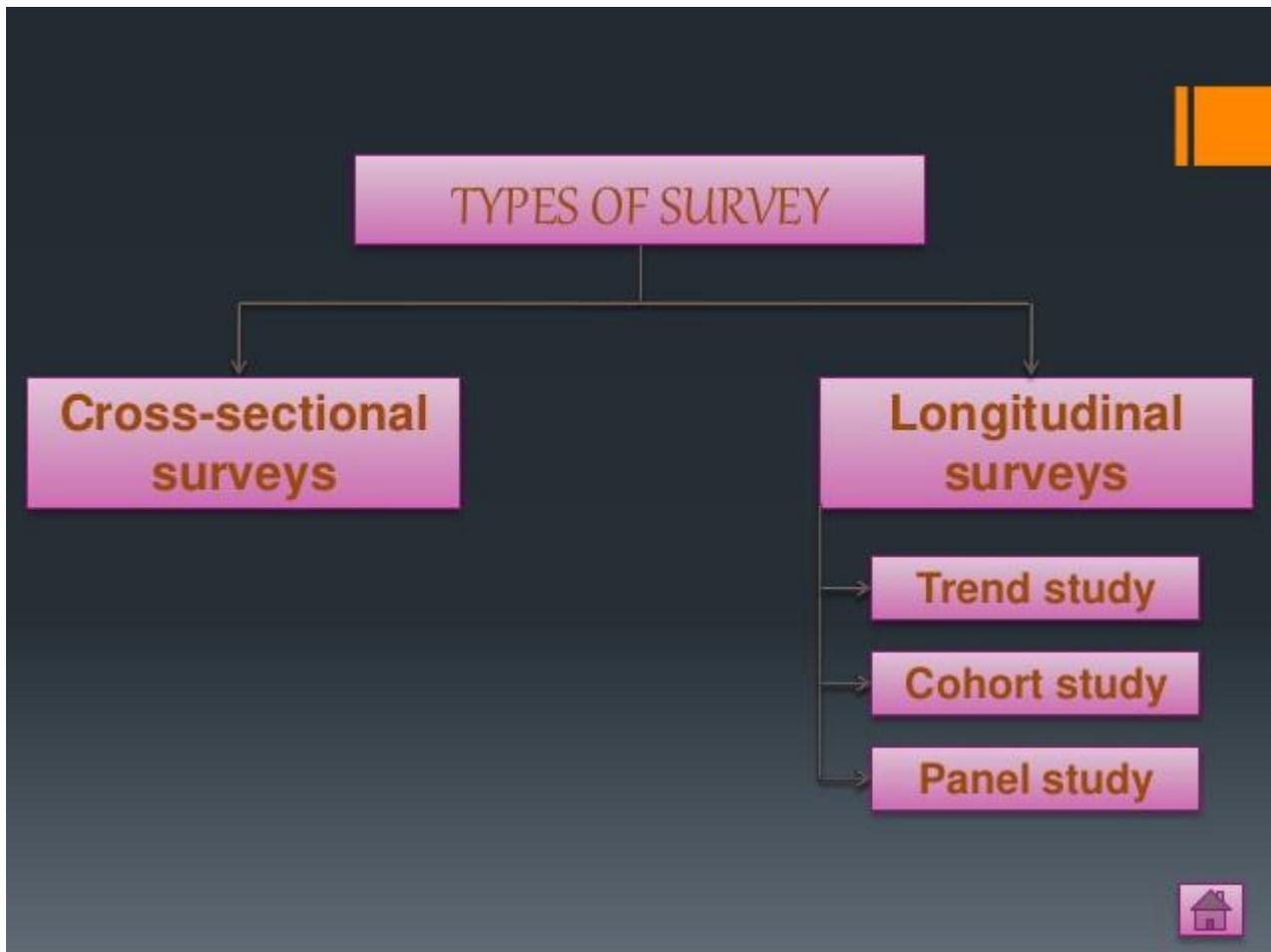
1. It is very difficult for a beginner to understand an abstract formula. If it is not preceded by a number of concrete instances
2. Pure deductive work requires a formula for every type of problems and an extensive use of this method will demand blind memorisation of a large number of formulae.
3. It will thus cause an unnecessary and heavy burden on the brain. It may even result in brain fag.
4. Memory becomes more important than understanding and intelligence, and that is educationally unsound.
5. If the pupil forgets the memorised formula, which is very likely to happen in case of blind cramming, he is at a loss and cannot recollect and reconstruct the formula easily.
6. The students cannot become active learners.
7. It is not suitable for the development of thinking, reasoning and discovery.

## CONCLUSION

The discussion of the scope, merits and drawbacks of these two methods leads •is to conclude that Inductive Method is the forerunner or predecessor of Deductive Method. The Deductive Method will give a good follow-up, if it is preceded by understanding through induction. Any loss of time due to the slow speed of induction can be made up through the quick and time saving process of deduction. There may be a number of arguments against deduction but it cannot be driven out of the field. It is to serve as the complement of induction. Induction leaves the learner at a point where he cannot stop; the after-work has to be completed by deduction. Deduction is a handmaid of induction: and what is left undone in induction, is fulfilled by deduction. The two methods are such good partners that the shortcomings of the one are offset by the other. Deduction is a process peculiarly suitable for a final statement, and induction is most suitable for the exploration of new fields. Deduction is the chief glory of mathematicians, but they take their facts from induction. Probability in induction is raised to certainty in deduction. The happy combination of the two is most appropriate and desirable. There are two clear-cut major parts of the process of learning of a topic: viz, establishment of formula, and application of that formula. The former is the work of induction, and the latter the work of deduction. Mathematics in the making is inductive, and its finished form is deductive. Understand it inductively and apply deductively. Application and **practice** should be preceded by understanding. Blind practice leads one nowhere. Thus the teaching should begin with induction' and end in deduction. induction gives **the** lead, deduction follows.

**Survey and Market studies,**





## **PROJECT METHOD**

This method is a modern contribution to educational theory and practice. In a way this method is an extension of problem method. This method is based on the philosophy of pragmatism. John Dewey wanted that education should be for life and through life. He put the child in the real life situation of learning. He assigned spontaneous, purposeful and socialized activities to the child.

**According to Kilpatrick-** A project is, “Whole hearted purposeful activity proceeding in social environment.”

**According to Ballard** –“A project is a bit of real life that had been imparted into the school.”

**According to Dr. J.A. Stevenson-** “A project is a problematic act carried to completion in its natural setting.”

### **Characteristics of a good project**

1. **Modern activities:** A good project is one which has the integration of various modern activities
2. **Useful and realistic:** Good projects are always useful and realistic. They are not merely theoretical.
3. **Economical:** Good projects are always economical in nature. They are never too expensive. Such projects are of such a nature that with minimum of time and expenses one can accrue the maximum advantage.
4. **Best experiences:** A good project is always based on the best experiences of children. Such type of projects also provides new wholesome experiences to the children which are of a very high standard.
5. **According to the mental level:** A good project is also according to the mental level of the students. So it can win over their goodwill.
6. **Availability of resources:** A good project is one for the execution of which the resources are locally available. Otherwise the pupils will have to face a lot of hardship and expenditure for the execution of the project.

### **Basic principle of project method**

1. **The principle of reality:** In projects the students are provided with opportunities to exercise their powers in real life situations. So this method prepares them to face the challenges of life with zeal and determination.

2. **The principle of freedom:** In project method the children are free to choose the activities according to their tastes, capacities and powers and not forced upon them by the teacher.
3. **The principle of utility:** A good project must be valuable socially. It should have a direct bearing on children's life and must fulfill their long standing demands.
4. **The principle of purpose:** A project is never purposeless. On account of there being a purpose the students pour in their whole heart into the project.
5. **Principle of interest:** When there is a strong project in that case activity takes on great significance and becomes of absorbing interest to the child.
6. **The principle of activity:** Child is active by nature. He wants to do things. An educationally sound method is one which provides opportunities to the child to do things for himself.
7. **The principle of within reach of the children:** The material required for the completion of the project should easily be available to the teachers and students.
8. **The principle of economy:** A good project should be economical. It means neither it is expensive nor does it take much time and efforts.
9. **The principle of experience:** The ultimate aim is to gain useful experiences knowledge for the sake of knowledge is of no use. So the child should get knowledge through experiences.

### **Merits of Project Method**

By making use of this method, following advantages are gained by teacher and students:

- a. As students get proper freedom to execute the project in accordance with their interest and abilities, because of which they get their psychological needs satisfied to considerable extent.
- b. This method is not only subject centered, but due importance is being provided to the students also. Students are permitted to choose projects on their own, as a result of which they make use of their abilities to maximum possible extent.
- c. Through this method, students are provided with various opportunities by which they can satisfy their interests and desires.
- d. Habit of critical thinking gets developed among the students through this method. Not only get this, an urge to make use of scientific methods to solve various problems also developed among the students through this method.
- e. With this method, students get the ample chances in which they can develop coordination among their body and mind. Through this method, teacher can lead a well balanced development of the students.
- f. Through this method, science teaching can be done with considerable success, as science is a practical subject and this method is also scientific and practical in nature. The selected project correlates with the real problems of life which students confront in their everyday life. Thus, they find it quite interesting to sort out such problems. Not only this, through the information gained, they become able to solve out their own life problems independently and effectively.
- g. This method helps in promoting social interaction and co-operation among the students, as they have to work in a group and have to interact with various persons for gathering information. As the student works with full agreement of the social

needs, he gets moulded in accordance with the social needs of the society in which he lives or exists. Thus, through this method, sense of social cooperation and responsibility get developed among the students, by which they can become responsible citizens in the future.

h. As students gain knowledge directly through their own efforts, thus, they acquire permanent kind of information, which is retained by them since a long period of time.

i. Mostly the projects are undertaken in classroom as classroom assignments, because of which load of home work from the students get reduced to considerable extent.

### **Demerits of Project Method**

This method has certain limitations, which are as follows:

a. This method takes a lot of time to plan and execute a single project. As the time available with the teacher is limited in the schools, thus they find it difficult to make use of this method in their class.

b. It is not possible to design different projects for different topics and it is also not possible to cover all the topics or content in a single project. Thus, this method becomes impractical in nature.

c. For proper execution of a project, large number of financial resources are required, which seems difficult to arrange in our nation as we have to face shortage of resources in every sphere of life.

d. Such method can only be proving successful if the teacher is highly knowledgeable, alert and exceptionally gifted. The responsibility of teacher becomes multil-folded as right from providing situations and opportunities for the selection of projection, he provides the students with all the provisions by which they can execute the project successfully.

e. Systematic and adequate learning is not provided by this method, as it is a method of incidental learning. Through this method, students learn only what is required by them in relation to the completion of the projects. Thus, through this process, it is not possible to treat the curricular areas in systematic and orderly manner.

f. Generally it is found that teachers do not possess much information regarding the manner in which this method should be used as a result of which they hesitate from using this method, as a result of which, its utility remains more or less limited to negligible extent.

Problem solving method,

### **PROBLEM SOLVING METHOD**

Everybody, at some time or the other, is confronted with serious problem of life or with minor problems needing immediate attention. Education is considered to be a preparation or a training ground for meeting this challenge. Students are to be trained in the school for social participation and to be equipped to meet the problem of complex life. Knowledge, thus gained in the school becomes useful and purposeful, and the students become active participants in the entire process.

**According to Rusk**, “Problem solving may be defined as planned attack upon a difficulty or perplexity for the purpose of finding a satisfactory solution.”

**According to Ross**, “Problem solving is an educational device whereby by the teacher and the pupils attempt in a conscious, planned, purposeful effort to arrive at an explanation or solution to some educationally significant difficulty.”

### **Steps in problem solving**

- 1. Recognition of the problem:** The first step involved in problem solving is recognition of the problem. A problem arises out of a situation. A situation should be created by the teacher in which the students feel the presence of the problem and the need to solve it.
- 2. Interpretation and delimitation of the problem:** Once the problem has been recognizing, it must be properly interpreted, defined and delimited. The teacher may explain the problem in detail or the student may interpreted it through discussion. The student should be clear about the scope of the problem. The age, intelligence and interests of the students should be kept in mind at this stage.
- 3. Collection of data:** After students have grasped the meaning of the problem they must be stimulated to collect relevant data in a systematic manner. The teacher may invite suggestions from the students regarding the relevant material.
- 4. Organisation and evaluation of data:** After collecting data, it should be properly organized and evaluated. The superfluous materials should be eliminated. The teacher should help the students in eliminating the irrelevant data.
- 5. Formulation of tentative solutions:** All interference drawn on the data must be considered tentatively.

6. **Establishing the final conclusion:** Tentative solutions are pooled together. Discussion takes place and the students are encouraged to take part in discussion. Wrong interference are rejected and final conclusion is drawn on the basis of logical and collecting thinking.
7. **Verification of result:** After arriving at final conclusion, kit may be verified. Its validity may be tested in various ways: a. By applying the hypothesis to new situation, b. By experimenting further with it, c. By collecting new data through study and investigation.

### **Merits of problem solving method**

1. **Intellectual development:** It develops power of thinking and reasoning of students. It stimulate intellectual pursuits and develops power of critical judgment.
2. **Development of social qualities:** Problem solving method provides valuable social experiences to students. They solve the problem through joint and collective efforts. Various social qualities like discipline, social sensitiveness, cooperation, fellow feeling, open mindedness, and tolerance are developed.
3. **Development of initiative and self dependence:** Students learn self dependence and initiative as they have to depend upon themselves for the solution of their problems.
4. **Development of study habits:** Students develop desirable study habits. They have to read various books. They develop the habit of selective study. As they have to solve many problems, they tend to be critical in studies.
5. **Development of self expression:** Students perform purposeful activities and get training in self expression through discussion during the solution of the problem.

6. **Assimilation of knowledge:** Knowledge is gained as result of purposeful activity, connected with students every day life. So it is easily assimilated.
7. **Problems of the life and active participation:** Problem method confirms to life. It prepares the students to meet the problems of life and helps them to learn how to act in the new situations.

### **Demerits of problem solving method**

1. **Time consuming:** Problem solving method is time consuming as children often go astray. The progress of students is very slow because they may not be able to find correct solution and go on repeating incorrect things.
2. **Unsuitable for small children:** The method is not suitable for small children because they do not have enough background for fruitful discussion of real problems.
3. **Dull and monotonous:** This method will become dull and monotonous if used too frequently.
4. **Lack of trained teachers:** There is shortage of trained teachers to put such method into actual practice.
5. **Lack of suitable books:** There is lack of suitable books for reference and guidance. Books written in traditional style cannot serve this purpose.
6. **Not suitable for lower standard:** This method is useful only for the students of higher classes who possess higher type of thinking required in problem solving.
7. **Unsuitable for existing system of education:** This method does not fit in the existing system of education. It is difficult to organize syllabus according to the requirements.
8. **Negative physical activity:** Generally problem solving method lays all emphasis on mental or intellectual activity like thinking and reasoning. Physical activity is neglected.

Simulation

and role playing Techniques: Review,

## **FIELD WORK,**

Field trip is any activity carried out by a group of learners outside the classroom setting to have firsthand experience of what happens in our environment or real life situation. Field trip/ Excursion provide outdoors experiences and observations from which the students learn. It could cover a few hours and could last as long as a couple of weeks.

Field-trips involve journey with the pupils to observe and investigate situations outside the class-room. Lonergan & Andersen (1988) define “the field” as any place “where supervised learning can take place via firsthand experience, outside the Constraints of the four-walls of classroom setting”.

### **Types of Fieldwork**

From the student viewpoint, all field activities can be placed somewhere on two continua: First, between observation and participation; Second, between dependency and Autonomy.

Observational Field work: Observational fieldwork is an important way of passing on staff experience and ideas, and is comparatively easy to organize. The principle problem with observational fieldwork is that students are only required to ‘be there’ with the result that their attention may actually be elsewhere, especially if the experience is protracted.

- The simplest and most traditional form of observational fieldwork is the ‘Cooks Tour’ or ‘look-see’ field visit. Students often describe this type of activity as boring, since they are not deeply engaged in fieldwork process, but it can be useful at the start of a field course, to give a first overview of an unfamiliar landscape. Couch (1985) argued that carefully directed observation can be a useful learning method, especially if reinforced by on site tutorial style discussion.
- Students become more engaged, typically, if the tour is on foot and they have the opportunity to converse with staff, rather than being lectured at. This format allows students to make some observations independently and to follow up in an informal way, issues they find interesting with staff.
- During observational fieldwork, if unprompted, students often miss key features, and if prompted, have a tendency to reproduce the staff viewpoint uncritically. Engagement can be encouraged by informing students before the start of the fieldwork that they will be required to submit an assessment describing phenomena that they themselves rather than the staff, have seen.
- The art of field note taking on observational fieldwork always has and continues to cause problem for many students.

Participatory Fieldwork-Participatory fieldwork has the reputation for engaging students’ attention and deepening the learning experience. However this is not always true. There is a continuum between staff led and autonomous work and it is probable that this also reflects a continuum of engagement on the part of the student, with students who undertake solo project work usually being more committed than those participating in staff led projects.

The drawbacks of participatory fieldwork is three fold.

- Extensive preparation is often necessary to ensure a satisfactory outcome.
- The project work is more time consuming than the 'Cook's tour'.
- It can be difficult to supervise adequately (for health and safety reasons, if not academic reasons) scattered groups, or worse, individual autonomously operating students.

#### Learner-practitioner and Participant observation-

- A variant of participant observation and learner practitioner activity, work placement, is becoming increasingly common. Students are placed with organizations, commercial companies, charities, government, local and national environmental agencies and planning departments and work as an employee of the organization for a period of as little as one week up to a whole year. This can be seen as a new and important format of fieldwork.
- Cooperative departmental research projects involving both students and staff working together in teams to solve active research problems are another development in this area and provide an analogue for the apprenticeship situation.

#### **Advantages of Field Trip**

- Field trip provides the student with the opportunity of having first hand knowledge of happening in our environment.
- It helps to generate and sustain student interest in the subject.
- It aids retention of information since the experiences are long lasting.

- It can help the student to develop interest in certain professions.

### **Disadvantage of Field Trips:**

- It may be a waste of time and resource if not well planned.
- It is externally difficult to carry out especially when it requires long distance.
- Accident may occur in the course of Field trip.
- It results in extra financial expenses on the part of the school parents and even the students.

### **Interview**

An **interview** is a conversation between two or more people where questions are asked by the interviewer to elicit facts or statements from the interviewee.

Interviews are a standard part of qualitative research. They are also used in journalism and media reporting and in various employment-related contexts.

The qualitative research interview seeks to describe and the meanings of central themes in the life world of the subjects. The main task in interviewing is to understand the meaning of what the interviewees say. Interviewing, when considered as a method for conducting qualitative research, is a technique used to understand the experiences of others.

Internal behaviour of the student can not be studied.

### 1.4.2 Interview

**Meaning** : Interview is called ‘conversation with a purpose.’ It is face to face relationship between the interviewer and the interviewee.

#### **Types of Interview**

1. Diagnostic interview
2. Administrative interview
3. Employment interview
4. Admission interview
5. Informative interview
6. Research interview
7. Counselling interview

#### **Steps in Interview**

- i. **Preparation for the interview** : Schedule of interview should be prepared in advance. The date and time of interview of each pupil in the class should be notified.
- ii **Physical setting** : It should be conducted in a private room free from noise. A properly lighted room and a comfortable seat for the counselee must be ensured.
- iii. **Organized material** : Material required for the interview should be organized. Even the opening sentence must be thought of.
- iv. **Pre-interview conversation** : Pre-interview conversation is essential where the interviewee is received. Appropriate topics for discussion for pre-interview are hobbies or school events.

- v. **Establishing report** : Report should be established. Report is characterized by mutual respect, co-operation, friendliness, sincerity and mutual confidence.
2. **Unfolding the problem** : Means to achieve at the problem. Methods of unfolding the problems are :
  - i. **Observation** : Two things should be observed
    - a) Physical reaction of the client.
    - b) Observation of clues for understanding the problem
  - ii. **Listening** : Interviewer should ask important, suitable and limited questions.
  - iii. **Talking** : Problem can also be unfold with the help of talking or mutual conversation between the counsellor and the counselee.
3. **Joint working of the problem** : Here counselee is taken into the confidence, pros and are explained to him and the solution is arrived at through joint efforts. The counsellor should increase rapport with the help of the following techniques.
  - (i) Sympathy      (ii) Assurance    (iii) Humour    (iv) Personal references
  - (v) Non-personal references    (vi) Reference to counselee's words
  - (vii) Threat    (viii) Approval
4. **Closing the interview** : See that the client is satisfied and summarizes the whole issue in a few sentences. Fix time if there is need for another interview. Interviewer should see that he has recorded all the necessary facts so that he can prepare as report.
5. **Evaluation and follow-up** : Some authors suggest this step. It is a post interview step.

### **Advantages of Interview**

1. It is most flexible way of understanding the individual.

2. It is natural like conversation.
3. It helps the counselee to understand the himself and solve his problems.
4. It can be practice on illiterate persons.
5. It is relatively easy to
6. It can be used for variety of purposes.

### **Demerits of Interview**

1. It is subjective
2. It is time consuming
3. It needs experts
4. It is placed in an artificial situation.
5. Depression may take place during the interview and spell our results.
6. Some times it's difficult to interpret the results of an interview.

To conclude, we can say that interview is essential in counseling. As it has some limitations it must be supplemented by other techniques.

### **Check your Progress**

1. What do you mean by interview?
2. What are the types of interview?

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