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**EDU301 Midterm Preparation Short Notes and Quizzes
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Lecture # 0

“Concept of Teaching”

Lecture Objectives:

- Perceive teaching as a social, political and ethical activity.
- Describe teaching perceptions as culturally and socially embedded.
- Use different metaphors to define teaching and teachers.

Short interviews from three people were taken to know their perspectives about teaching and teachers.

Interview 1:

Teachers are the future makers of young generation. Teaching is a very respectable profession. Regarding this, teachers have some expectations that he will wear a hat of many roles. The roles are of a good communicator, evaluator, decision maker, class manager and member of a team or group. Teachers must play all these roles with complete responsibility. My philosophy of choosing teaching as a profession is that I want to motivate my students to learn in a way that has positive influence on what they think and act. I see teacher as a gardener and teaching strategies as a fertilizer to grow the students just like a seed. At the end, I must say that learning process in the classroom will never stop. Students learn from the teachers and teachers learn from the students.

Interview 2:

Teaching is a noble profession. Teacher is the source to impart knowledge to the students. The goal of teaching must be to provide the students with conceptual knowledge rather than focusing them to rote learning or memorization, so that they should not face problems in their practical lives. Teachers are the agents who can bring change to the society. Teacher is a path or a road map on which the students travel to get their destination or goal.

Interview 3:

Teaching is a self-oriented profession which serves to guide nation to access successful future. I adopted my career as a teacher because a teacher helps the students to become what they want to become. It is expected from a teacher that he should act as a professional educator who considers the needs of the students.

Assumptions about teaching:

- Teaching is a noble profession.
- It is an activity to impart knowledge.
- It is a way of developing certain desirable behaviors among students.
- Teaching is an activity. It is way to teach people discipline, to teach students discipline.

Different perspectives of education in history:

The important role is of the Prophets and saints who teach in informal settings.

Informal education is education that is not given in proper schools. And if we see, Buddha,

Pythagoras, Jesus Christ, Prophet Muhammad (S.A.W) and Karl Marx They all did it in informal organizations.

Informal settings are important means of learning.

Apprentice ship model: is also a way of learning. A person who wants to learn a skill spends a certain period of time with a skillful person. In this way, the person who doesn't have the skill, learn those skills.

It is based on Vygotsky's work, which involves peers working closely together with a teacher in joint problem solving. e.g. workshops and skill-learning centers.

Assumptions:

- To understand how things actually developed, and who the prominent people are, who worked in this area?

- It was 16th century, actually which perceptions about education, teaching and learning developed. In past, except Socrates, Plato and Aristotle, rest of the people thought education as a means of status quo.
- Extra-curricular activities are always considered as extra.

What seems philosophy of education of Prophets?

- To equip people with basic literacy
- To give information
- To make them learn skills
- To bring societal change

If teaching is not bringing societal change, then probably teaching is not fulfilling its spirit. If we believe that teaching is about bringing societal change then we really need to reflect or transform our actions so that we are able to bring change.

Discussion:

- How research takes/define teaching?
- How other people have taken/perceive teaching?

In opinion of Educationists or other people: (about role of the teacher)

Educationist: 1

There was a focus on functions or process of instructions and behavior, but now in modern times, a role of a teacher and the expectations attached to it are completely different.

The fast and foremost is consideration of a teacher being an agent of change. The one who could bring change to the society, one who would have some kind of outer box thinking. The role also demands the teacher to be a collaborator. It is no more a one-way process in which empty pitchers were filled up but its totally a two-way process of teaching and learning. And finally, the role also demands not only of a facilitator but of a person who can trigger off higher order critical thinking skills.

Educationist 2:

The role of a teacher is very important in building the character of the students and in enhancing his natural skills. In old times, the role of the teacher was just to come, deliver a lecture, give the students tests and quizzes, assignments and check them, give them grades and that's it. In modern times, the teacher is an agent of transformation of the students from less skilled individuals to skilled individuals which have good skills for doing their work and are also responsible citizens.

The role of a teacher is changed from a lecturer to an agent of transformation. Teachers should interact with students more than they do in previous times. Now method of teaching is called interactive teaching. Teachers involve the students in learning.

Teaching as a social, political and ethical activity:

- **As social activity:**

Man is a social animal because it lives with other people, it socializes with other people. It is necessary for its existence and emotional strength to stay with other human beings. When we say that teaching is a social activity, it means that teaching can't be done in isolation. It needs people with whom teaching can be done. So it is essentially a social activity.

- **As a political activity:**

If we say that teaching is a political activity then teacher needs to have some perception and teacher need to discuss those ideas with the students. Actually both of them should work together for a social change. Because political ideas are important not only in the sense of politics, politics means a set of ideas. Teacher must share ideas with the students so that they can work for a change in society. If education is not serving this purpose and teachers are just providing the students with the content knowledge then essentially this teaching is not a political activity.

- **As ethical activity:**

It is a duty of a teacher to fulfill his responsibilities ethically. Ethics include that teachers need to be committed to their profession, they need to be honest, and dedicated. If teachers are not exhibiting the above then they are not taking it as an ethical activity. It is also important because teachers are role model for students. So if a role model is not performing these duties ethically, then definitely this role model will not be a good example.

Teaching perceptions as culturally and socially embedded

Different cultures have different perceptions about education. The perceptions of education in Pakistan are different from other countries. In Pakistan there are urban and rural cultures and perceptions in both cultures are different.

Research says that the perceptions are socially and culturally embedded. Perceptions of teachers in Pakistan are different from the teachers of other countries. Although in Pakistan, there are different cultures and people living in those cultures hold different perceptions on education and teaching.

A survey was conducted for the clarification of this concept. In this survey, some teachers were selected from rural and urban areas, and some from the private and government schools. Then the ideas of the teachers and parents of the students were analyzed to see whether they differ or not.

- Firstly, the teachers from urban schools say that it is their responsibility to teach discipline to the students. The same was the perception of parents, they say that teachers are very respectable and must teach student discipline and behaviors. And students must obey them.

- Secondly, the teachers from government schools of the city say that their role is to teach the students how to read and write. Because these students come to school to learn how to read and write so that they can get jobs in factories. The parents also respond the same, they say that their sons may get jobs in factories or some other work that they can do easily. The parents do not expect high potential jobs.
- Thirdly, the opinion of teachers from the private schools is that they are the facilitators. Their responsibility is not only transmitting the content knowledge to the students but finding their hidden potentials. Parents respond the same that they are paying fees and it is the responsibility of the teacher to nurture the potentials of their children.

The important thing in the above survey is the “Cultural difference”. We are living in a status stratified society, so the students studying in the government schools belong to low income group, their parents and teachers also think the same. So we can say that perceptions on teaching are culturally and socially embedded.

Metaphors on teaching and role of teachers:

There are different metaphors of teaching, actually what we think about teaching is our metaphor. The metaphor is something that tells that how you take teaching?

If we think that teacher

- **Is a source of light:**

Imagine that teacher is a sun or a candle; it is a source of light. It is spreading its light everywhere. The students don't have light; the teacher is giving light to students i.e. his knowledge.

- **Is like a tree**

Imagine if a teacher is a tree, it is giving his shadow to everyone. The one who come to that tree will definitely get shadow and fruit of knowledge.

- **Is a gardener**

If teacher is a gardener, and use the teaching strategies as a fertilizer to grow the students just like a seed.

Thoughts of these perceptions:

- Is there no knowledge gain, if there is no teacher?
- Teachers teach manners and behaviors.
- Who decides that certain behaviors are appropriate and others are not that appropriate?
- Do children really learn discipline in schools?
- A formal education comprises of a basic education that a person receives at school.
- Informal means unofficial and it takes place outside of the standard school setting.

“Teaching as a Profession”

Lecture objectives:

- Identified and reflected upon common misconceptions in Education, Teaching and Learning.
- Reflected upon the statement “Teaching is an Art and Science.”
- Reflected upon the criteria for professional and moral obligation of professionals.

Some misconceptions in teaching:

- **Schools are isolated places.**

Sometimes teachers ask students not to exhibit certain behavior in schools e.g. sometimes they ask students not to shout but teachers themselves are shouting. It is actually very disappointing that whenever teachers ask the students not to shout, their own voice level is very high. Definitely, teachers are also the product of society; they have also learnt those behaviors in their homes and schools. So it is very important not to consider schools as isolated places. Teachers believe that schools are isolated places that are totally detached from the society which is not true.

- **Education is about learning of different subjects:**

This educational view has vocational orientation. The word “Vocational” identifies use for job or utility for job market. It means that if we are sending the students to schools to learn different subjects, we want them to get prepared to get admissions in professional colleges. If they get admissions in professional colleges they will become competent professionals. Education is serving the purpose of getting jobs in the job market. Now how can we claim that teachers are agents of social change? Most of the times we focus on teaching of different subjects and we assess students on performance of these subjects. We are always testing their knowledge but we just forget that purpose of education is much more than teaching students these subjects.

- **Learning is exploring different subjects:**

According to Friere: “**In fact knowledge is created, when we act and reflect.**” Knowledge about different facts is stratified knowledge. Your objective knowledge has its own importance but that is called static facts. Subjective knowledge is also very important. Subjective knowledge is something that is learnt by reflecting, acting on something. Learning is not only about exploring the static facts but it is to explore the knowledge.

- **Drama or debates are extra or co-curricular activities:**

These are neither extra nor co-curricular activities but these are all curricular activities. These are actually means of holistic development of a child. **Holistic development** means complete development; a child needs to develop physically, intellectually, ethically, socially and spiritually. Unfortunately, when we say that aim of schools is to teach only different subjects, we do not focus on the holistic development of a child. So it is really important for us to understand that participation in these kinds of activities is not something wasting time rather it is very important for their holistic development. Holistic development of a child requires participation in games, debates, dramas etc. we should provide these opportunities where students perform in dramas, develop their speaking skills by participating in debates or dramas. Similarly, essay writing competitions so that they can develop writing abilities. We should actually allocate time for these activities in their timetable so that they carry out such kind of activities.

- **Silence promotes learning:**

Teacher asks the students not to talk. They have a misconception that “Learning is when there is silence rather complete silence”. Teachers do not go through theories or research that is why this misconception is so dominant in our schools. We know that learning is when there is sharing of ideas. There is a concept of peer learning, children learn from their peers, they actually learn more from their peers than they learn in schools by teachers.

Is teaching an art or science?

Idea of “**Teaching is an Art**”, was developed by William James in 1891. So, an artist is able to create things. If we say that teaching is an art then we are expecting that teacher needs to be very imaginative, innovative, teacher must have the skills that an artist possesses. There is also a drawback that when policy makers claim that teaching is an art, they say that teachers are born teachers as artists are born artists. If teachers are born artists then we actually deny the importance of professional organizations or professional trainings. So if we say that teaching is an art we must not say that teaching is by birth, or these are innate capabilities that could not be learnt.

Science is an organized body of knowledge. Organized body of knowledge means that it is very systematic. It has some research underpinnings and theoretical underpinnings. Research and science go side by side. The claim that teaching is a science; it shows that there is research in teaching. All the theories of teaching are based upon research, research in psychology and sociology. It is actually true that teaching is an art and science.

The criteria for professional and moral obligation of professionals:

Like all professions, teaching also has some standards and criteria.

Criteria to be a professional:

- **Learning a profession involves learning many concepts and principles of that profession.**

For example, if we consider medicine as a profession then there are number of key concepts involved in it. The students learning medicine needs to understand all the principles and concepts of that profession. We cannot compare a compounder to a doctor because a compounder does not know all the basic concepts and principles. The knowledge a compounder acquires is far less than that of a doctor. So when we talk about a profession, we actually assume that the professional has acquired the knowledge of that particular subject.

- **A profession has a body of techniques and they may be transmitted:**

Every profession has its own **techniques**. A cameraman knows the techniques to handle camera, a doctor or surgeon knows how to handle medical instruments. Knowledge of the skill gained must be practiced, as you know that “practice makes the man perfect”. It is important for the professionals that they must know the skills of their profession.

Transmission of skills

It is actually believed that in professions, if a senior person has acquired certain skills than that person can transmit those skills to a junior person.

- **A profession is internally organized and self-disciplined (code of ethics):**

Internally organized means that there are different professional organizations that tells the professionals that what they have to do. E.g. Pakistan Medical Association, Engineering Council, Institute of Accountancy is also an organization that tells the chartered accountants that how they have to practice their profession.

Self-Disciplined: means that the professionals are ethically bound to follow some norms and rules which are set by their organization. They develop their own code of ethics and do not violate them.

- **A profession has a social function:**

We are living in a society where we need to follow law and order and if there is any problem then we really need to go to court, so law profession is important as social function. When we talk about social function, those occupations are called professions which the people needs rather people cannot survive without that profession. It should be the need of the people. So only that job is considered as profession which is based on people's need.

- **A profession allows independence or Autonomy:**

There are certain professions which have strong internal organizations where they can take decisions.

There autonomy is at individual level as well as collective level. E.g. a doctor has the autonomy to prescribe medicines to patients. If there is a serious patient, then a group of doctors to decide the treatment of that patient.

How can teaching be considered as profession?

- Concepts and principles in teaching profession:

The students who are enrolled in 4 years B.Ed program have the curriculum. This is basically a content which is based on all the concepts and principles to be learnt e.g. they will learn about how students learn? Philosophy of education, methods of teaching, educational research, assessment & evaluation

etc. so all these subjects will provide them the knowledge which is a core requirement to be a teaching professional.

- The techniques learnt by teachers:

Every profession has its own techniques. Some teaching techniques are: how to motivate the students? What is its theoretical background? You can motivate children by a motivational strategy, but the same strategy cannot motivate elders. In the same way, a teacher must know the techniques to teach different subjects. Because each subject have different demands or flavors and teacher needs to know the difference between the teaching of English, science or mathematics and other subjects.

- Is teaching internally organized and self-disciplined:

Every profession has its organizations; Teachers unions in Pakistan are serving the purpose of protection of the teachers' rights. There is a society named as "Society for Pakistani English Language Teachers" (SPELT) which organizes different workshops and other developmental programs for the teachers.

- Teaching as a social function:

We all believe that teachers have a very important social function. It is very unfortunate especially in Pakistan that mostly teachers are teaching different subjects, they are concerned about grades of students, they are not concerned about their holistic development. It is obvious that teaching has a prime social function but unfortunately, it is not been taken care of in Pakistani context.

- Teacher in Pakistan have individual autonomy or not?

In Pakistan, teachers don't have the autonomy. He/she doesn't have the powers of decision making. There is no representative of schools who is involved in educational policy making. Curriculum is formed under Ministry of Education many times as in 2006, 2007, 2008 etc but when this curriculum is sent to schools, teachers are supposed to teach that curricula. They neither are nor supposed to go beyond those curricula. School management decides that which subjects must be taught to the students. There is no autonomy given to the teachers.

What future teachers actually need to learn is:

You need to develop a belief that:

- We are living in a changing world, thus being professionals we constantly need to upgrade our knowledge.
Being a teacher you really need to equip with every new research that is coming on motivation, pedagogy or any other. It can't be done unless you believe that you need to learn and need to change. So it is said that "To Learn Is to Change"
- You need to acquire the knowledge of foundations of education, pedagogical knowledge, pedagogical content knowledge, assessment and evaluation and teaching techniques and skills.

- **Foundation of education:** you will learn in the 4 year program about philosophy of education, psychology of education etc. these are actually the foundations of education.
- **Pedagogical knowledge:** pedagogical knowledge means the knowledge about how to teach the students
- **Pedagogical content knowledge:** every subject has its own demands or flavors, so there are different ways to teach different subjects.
- **Assessment and Evaluation:** being a teacher you should know that what to assess? How to assess? What to assess? Similarly, how to report results? How to use data? All these things need to be acquired to be a good teacher.
- **Teaching techniques and skills:** you must know the teaching techniques and skills that are expected from a good teacher.

Things you have to learn, when you want to be a professional:

- **Teaching skills:**
- **General teaching skills:** - **Planning lessons**
 - **Classroom management:**
 - **Assessing pupils learning**
 - **Motivating pupils**
 - **Managing pupils' behavior**

Develop professional values and practice:

Professional values for teachers are:

- Commitment
- Honesty
- Intellectual honesty
- Reflection in action. Reflection on action

There should not be gap in what teachers say and what do they do. Because if there is any gap then they would not be able to present themselves as true role models. So, being professionals we should have certain knowledge of the profession. We should have skills but at the same time, we need to exhibit those dispositions which make us good role models.

“Professional Behaviors and Context of Schools”

Lecture objectives:

- Reflected upon the principles for professional behaviors.
- Analyzed educational, social and collegial context of schools.

Principles for professional behaviors:

- **Commitment to the students:**

An educator needs to strive to help each student realize his/her potential as a worthy and effective member of the society. A teacher needs to effort individually that every student must realize his/her potentials and reach to the maximum level. If we are not successful in realizing the potential of every student, then actually we are not committed to the students. The level of commitment to the profession must be to the range of every student. In most of the cases, teacher really appreciates high achievers. At times, a teacher is very much concerned about the learning of low achievers. So, the teacher mostly focuses on the low achievers or the high achievers but the students with average learning are ignored. They also need the attention of the teachers as other high and low achievers.

Educators work to stimulate the spirit of inquiry and acquisition of knowledge. We are inquisitive by nature. When a child grows up, he asks many questions about his surroundings. He wants to know what and how is happening around. But when he is sent to school, normally he asks many questions but those questions are not answered properly. So, being educators, we need to keep that spirit of inquiry in depth rather we need to stimulate that spirit e.g. if a student is not habitual of questioning in class then we need to develop that habit in him.

If we do not develop that habit then ultimately, the students will not enjoy their acquisition of knowledge. Everything seems a burden to them. Being educators, if we say that we are very committed teachers then we really need to raise the potential in each child in our class and we need to stimulate the spirit of inquiry and acquisition of knowledge.

- **Commitment to the profession:**

1. Raising professional standards
2. Professional judgment
3. Influencing policies
4. Professional organization

The educators need to exert every effort to:

- **Raise professional standards:**

If teaching is a profession, then what are the standards for teaching? A teacher needs to know

- **A pedagogical content knowledge:** the subject a teacher is going to teach to class 8th must know the content of that subject and the methods to teach that particular subject.
- **Communication skills:** communication skills must be so clear that a teacher can convey lecture to the students easily. A teacher must have a good eye contact with the students. A teacher must be able to read their verbal and non-verbal cues.
- **Assessing skills:** a teacher must know how to assess learning of the students. A teacher must know different assessment methods.
- **How students learn:** a teacher must know how students learn e.g. if I am a teacher of language I must know how students learn their first language and how they learn their second language. A teacher must know the learning theories as well.
- **Recent developments:** a teacher must know the recent developments related to the profession. Recent development means the recent research on the profession. Different theories to teach and assess the students.

If I claim that I am a professional teacher, then I must come up to these standards. But the point is to raise the standards not only to meet them. To meet the standards is a minimum requirement, but a good professional is the one who goes one step ahead to those standards. We educators really need to raise the professional standards.

- **Promote a climate that encourages the exercise of professional judgement:**

A judgement that is given by a professional himself is a professional judgement e.g. in education, if a teacher is giving a judgement about the students that he has a good vocabulary but he is weak in grammar. This judgement is a professional judgement because this judgement has evidence on which the judgement is made. If a judgement is made by parents, they do not have direct involvement with the education of the child as the teacher has. So we will say that is not a professional judgement.

This professional standard demands from us to create a climate that promotes the professional judgement. This climate can be created through parents-teachers meetings where parents are told about the role of the teachers, teacher's expectations from the parents as well as students and the community. In this way, we are going to educate teachers as well as the community. We cannot achieve this standard by being indifferent.

- **Achieve conditions that attract persons worthy of the trust to careers in education:** Unfortunately, our own self-image is that we could not get admissions in engineering or medicine or computer science so that is why we have come into teaching.

So, we have to change our own self-image as well as of the others regarding teaching as a career. We have to advocate that make teaching your first career option. As far as our own image cannot be changed, we could not convince others. Being teachers, we need to advocate teaching as a career.

- **Assist in preventing the practice of the profession by unqualified persons:**

Unqualified means that those people are teaching who do not have degrees in education i.e. B.Ed or M.Ed but they are teaching and they are considered good teachers. We must have to stop such practice that unqualified people must be replaced by the qualified.

In government sectors, if you want to be teachers then you need to get a degree in education. But unfortunately, in private sectors and specially in street schools there are many teachers who are unqualified. They started teaching after their matriculation or intermediate exams. As a result, there is no education, there is just schooling.

So, if we say that we are professional teachers, then we need to show our commitment to the students and we need to show our commitment to the profession. We need to raise professional standards. We need to promote a climate that encourages exercise of professional judgement. We need to advocate teaching career and we need to stop practices of unqualified people.

Key context of schooling:

Some interviews were taken from the people to know their views about schooling. The brief view of those interviews is given below one by one.

Interview 1 (Parent):

We sent children to school to become a better human being. They may know what is right and what is wrong. They can get better job opportunities. The more educated the child is the better job he will get. There are lots of activities in school. The child learns the attitudes of winning and losing. Students get self-confidence through schools.

Interview 2 (Student):

I like to go to school because there are number of activities like coloring and painting. I like my teachers because they speak to me very politely. They do not scold the students and it must not be allowed in schools.

Interview 3 (Teacher):

School is a platform where children's moral, physical, emotional and ethical development takes place. A teacher is responsible in the cognitive development of a child. A child considered school as a new place and feel difficulty in adjustment. But it is the responsibility of a teacher to provide him with such environment that his social development can take place. In schools, not only different subjects must be taught but also there should be co-curricular activities.

Assumptions on schooling:

- **Group orientation activity:**

Schooling is not about a single person, it is a group orientation. A successful school is the one whose group orientation is so strong.

- **Schools are composed of many different types of people, sects, religion, classes and economic beliefs:**

It is very unfortunate that sometimes we think that wearing a same uniform will also make their thoughts uniform. They are never alike; they are diverse people coming from different classes, economic beliefs, and different religions.

- **Schools follow a certain curriculum:**

Educationist named the key context of schooling as:

- **Educational**
- **Social**
- **Collegial (Professional)**
- **Schooling in educational context:**

If we assume that teaching of different subjects is a part of schooling then these subjects are called an important part of the schools. Then we should help the students to learn the content of the subject at different levels. These are:

- **Literal level:** it means that whatever you teach the students, the students get it well. E.g. If you teach them some definitions, they can learn them. If you taught them some facts, they can understand them.
- **Application level:** whatever the content is taught to the students, they must know its application as well. E.g. you teach the students about map reading, and then you ask them to tell you what map reading is? They will tell you definitely. But can they find any location from the map? Can they use the map in their practical life? It is a teacher's responsibility to teach them in the way so that they can identify different locations using the map.
- **Higher thinking levels:** educational context is not about memorizing different facts and concepts. It is not copying things from the board or books. Educational context is much more than that. It is actually developing thinking skills among students. It is about creating creativity. It is about developing questioning skills among students.

Social context of schooling:

A sign in the Singapore International Airport reads “Welcome to Singapore: where our only National Resource is Our People.”

- What does this sign board indicates?
- What is the responsibility of a school in Singapore?

This statement shows that in schools the most valuable thing is not its building, computer labs or multimedia rooms but the people. Teachers are bound to develop social capital of the people, not only students but all of the people.

Social capital:

- **Sum of interpersonal relationships:** the person who has many contacts or relations is considered as he has more social capital. Can we live in isolation in schools? Definitely, no. because there is group orientation in schools. We need people. We live with people.
No one can actually live in isolation.
- So we have to increase the social capital of every student. (It is the responsibility of a teacher to increase the social capital of every student. Most of the times, teachers come to the class with lesson plan, teach the lesson to the students. They expect from the students to listen to the lesson, they give them written work and then leave. There is no time for the students to communicate with each other except in break or after school. It is the responsibility of the teacher to increase the social capital of students by organizing group activities. Instead of doing things alone, they may communicate with each other. In this way, they will increase their thinking skills also. We are not teaching in a school to an individual but it is actually a group oriented activity. Students must know that how to resolve conflicts? How to solve problems? The interpersonal skills of the students are improved when they work with their opponents instead of their friends. We need to make the students learn that all students are diverse and we need to learn how we communicate with different kinds of people.)

Collegial context of schooling:

Is “Characterized by or having power and authority vested equally among colleagues:”

Collegial context is something that emphasizes that power and decision-making should be shared among some or all members of the organization (Bush, 2003).

Power is shared among some or all members of the organization who are thought to have a shared understanding about the aims of the institution.

Reflect upon the following statements displayed in the school staffrooms:

- **“School business is not discussed here”** it means that the matters of schools are not discussed in the staffroom. People don’t like to talk about textbooks, students, performance of the students, examination papers, or issues.

of classroom management in the staffroom. It means that in this school the collegial context is too weak. Colleagues are not support of professional development. Whenever we go into profession, we always have to learn from people, the seniors are our assets. If they do not discuss the things with us how can we develop professionally? People in this school are not ready to grow as the statement in their staffroom shows.

- **“We believe in sharing ideas, work and food”** the statement shows that the teachers in this school are good colleagues. Because they want to share the ideas so that they can learn from each other. They want to share their work habits so that they become the support for their colleagues.
- **“Let’s establish a learning community”** it shows that the community working in a school is a learning community. We all learn from each other. A teacher is the most important learner in the class. Because he has to explore the realities of every student. Their intellectual abilities and how he has to enhance them. A good teacher is the one who actually strives to help each student achieve their maximum potential. At times, we are unable to identify the realities of every student and we need the support of our colleagues. And in a learning community we can get support of our colleagues very easily.
- **“My colleagues are my mentors”** the statement shows that there is respect for the mentors and we have to learn from them. It again indicates the sharing of ideas.
- **“Relaxing time”** this statement also indicates as the first statement that school business is not discussed here. This is our time to relax. When we talk about profession we need to raise professional standards. When we wrote in staffroom that it is a relaxing time, we are not meeting the standards even how we can raise the professional standards.

So when we talk about the collegial context, we need to ensure that we are going to learn from our colleagues. They should be our strength. We need to grow professionally.

Collegial context is not restricted to the schools rather now it has become web based.

So, when we say that we are professionals we need to ensure that we maximize this collegial context we learn from each other.

Lecture # 04 **“Incentives**

and Responsibilities of Teachers”

Lecture objectives:

- Analyzed teachers' incentives and their level of functioning.
- Reflected upon the teachers' decision making and responsibility.
- Analyzed the terms: Teachers' efficacy and reflective practitioner.

Incentives for teachers:

According to research, following are the incentives for the teachers:

- **Recognition as an excellent teacher (reflected in students' warmth, enthusiasm, appreciation).** The question here is the recognition to the teachers should be given by government of Pakistan? Or from the schools? According to research, the best recognition is got from students and not from the government or the school administrators. The warmth, respect and appreciation in the eyes of the students for the teacher are the actual recognition. This recognition is so appreciating that the teachers get energized.
- **Respect of colleagues:** there was an organization, whose motive was the following statement:
"The esteem of our colleague is the foundation of power" If you want to be powerful and if you want to assess then you need to have respect and your esteem should be very high. Actually when you are doing someone's esteem high, then there is another feeling of efficacy. Feeling of efficacy is very important for the teachers e.g. there are number of activities in schools like morning assembly, debates, games, plays etc. teachers are very competent in the school, they are teaching their subject very well but when they are asked to organize such activities they feel that they can't do it well. But if their colleagues start motivating them and say that you are able to organize such activities. This is the feeling of efficacy and there is a great role of the colleagues in developing this feeling.
This feeling is also an incentive. Teachers who do not get this incentive actually leave the profession quite early.
- **Working with other professionals:** this is also an incentive that if you got an opportunity to work with other professionals, you will feel energized. But if you are working in such an organization where you are not allowed to work with other professionals like if you are a math's teacher, you have to work with other math's teachers or if you are a language teacher you have to work with other language teachers but not with other professionals. So you may not be motivated.

What are different motivating factors and incentives for our Pakistani teachers?

Some interviews are taken from the teachers in Pakistan to know their motivation factors. These are discussed below:

Interview 1:

Money is only a motivating factor that insists you to go to your job in routine regularly. But the incentives that are really important are the primary and secondary sources with which the students interact with you in their every aspect of life. We feel affiliation motivation that we are affiliated with the students in so many aspects. We get an opportunity to develop competence not only in ourselves but the students as well. You are the source of motivation for the students not only in terms of your profession rather you are also helping them in their daily life routines as well. That is the biggest achievement for a teacher.

Interview 2:

As a teacher trainer, I feel that motivation factor is something when student gain positive change in their thinking, behavior and attitude. By the end of the day, I feel happy that I help them in bringing change in them.

Interview 3:

When there is no motivation, you cannot work properly at your working place. A teacher should be self-motivated. If a person is not self-motivated, then he could not perform a variety of tasks. By being in an organization, I have learned many things from many people. Besides that the workshops and seminars also play a very important role in motivation of the teachers. These tell us where we stand and what we can learn from others. Recognition as a teacher is also motivating. Students come to you and they feel satisfied after you answer their questions. This shows that you are there to help somebody out. The students, the way they benefit from you, the way they seek help from you is also a motivation.

Common assumptions from the above interviews:

- **Recognition:** recognition from the students is actually a motivating factor for the teachers.
- **Esteem:** where the teachers think that their self-esteem is becoming lower, they don't want to work at that place
- **Growth (working with other professionals):** teachers want career growth. They want growth in their learning. They want to learn the new methods of teaching, classroom management and other new activities. E.g. in an educational institute, you may start your career as a lecturer, then move to assistant professor, then associate professor and professor. But unfortunately, in schools, there is no professional growth seen.

Teacher's levels of functioning:

1. Intentionally Disinviting
2. Unintentionally Disinviting

3. Unintentionally Inviting

4. Intentionally Inviting

1. Intentionally Disinviting:

In this state of functioning, a teacher does not invite people to give you suggestions. There is no sharing of ideas.

2. Unintentionally Disinviting:

When you are working at a place for a long time. You realize that it is not a good norm, that you are not sharing your ideas. You must share your ideas and ask for advice.

3. Unintentionally inviting:

In some cases, teachers start sharing their classroom management with other teachers unintentionally. It means that they do not want to share but share the things with others unintentionally. E.g. in a staffroom, a teacher is saying that I could not finish the lesson on time which I have planned. You also become the part of that conversation by saying that it happens to me sometimes also. Now actually you invite suggestions on how to resolve this problem unintentionally.

4. Intentionally inviting:

This is the highest level of your teaching development. You come to realize that you didn't know everything and you need development. You are able to identify your flows and mistakes. And you need help and advice from your colleagues.

You are intentionally inviting the people to advice you.

Teacher as a decision maker:

There are some common questions that will show that whether the teachers have the power of decision making or not. These questions are discussed below one by one.

1. What to teach?(No autonomy)

Teachers have no autonomy when the content of the subject is decided or selected. If a teacher is working in a school system, then the school decides that what content should be taught to a particular class. If we talk about government sector, the books published by the Punjab textbook board or the content which is decided by the ministry of education will be taught. There is no autonomy of a teacher

2. How to teach?(Autonomy)

Teacher has the autonomy of how to teach in a class. He can decide which teaching method should be used.

3. How to manage class?(Autonomy)

Teacher has the autonomy that he can manage the class in the way he feels feasible.

4. How to assess pupil's learning?(Autonomy)

Teacher has the autonomy in this context also. He can assess the students' learning according to the methods he teaches.

5. How to give feedback?(Autonomy)

Teacher can give feedback about every student. Because he is the one who is directly involved in his learning.

6. Which resources to be used in classroom learning?(Autonomy to certain extent) Teacher here also have the autonomy to certain extent because resources are provided by the school administration and now the teacher can use them accordingly.

7. Which activities to be used?(Autonomy)

Teacher can manage different activities in the school for the moral, social and ethical development of a child. A teacher must use only those activities which maximize students' learning.

Teacher's responsibilities as a decision maker:

Being a teacher I need to:

1. Learn about learning styles of students and use strategies which match with learning styles.
2. Manage classroom to maximize pupil's learning.
3. Give constructive feedback to maximize learning.
4. Use different assessment strategies to maximize students' learning.
5. Use relevant low cost resources.

Reflective practice:

To explain reflective practice, I will first explain the light of reflection. The light of reflection is "bouncing back of light to create an image." Teaching reflection is related with the light reflection for better understanding, the definition of teaching reflection or reflective practice

is:

"Answering some key questions to create an image of the classroom teaching and learning." The definition means that there are certain questions that teacher must answer by himself. He must notice his classroom environment that if there are 30 students in a class, how much students are answering the questions asked at the end of the lesson. How many

students participate in discussion? How many students participate in activities? These questions must be answered by the teacher himself. The answers to these questions will actually tell the teacher that what the environment of his class was. So, **reflective practice** is very important for a teacher. Being a professional, I need to raise standard of my profession and reflective practice is definitely one of the standards of teaching profession.

Reflection is of two types:

1. Reflection in action
 2. Reflection on action
-
1. **Reflection on action** means that you have to answer some questions so that you may know what the environment of your class was.
 2. **Reflection in action** comes from experience. Once a teacher is in class, she/he needs to reflect on all his/her actions. The reflection on every action at the same moment when the action is being taken is reflection in action.

Basically, reflection is the means of creating a dialogue. A teacher is creating dialogue to himself and as a result he knows his strengths and weaknesses. Reflective practice is an important thing which we need to develop. To be a reflective practitioner, means a lot of hard work and attitude to learn.

Lecture # 05 “Conceptual

Change, Learning theories and Modeling Process”

Lecture objectives:

By the end of the lecture, you will have reflected upon:

- The term conceptual change.
- The formula for teacher’s growth.
- Theories on how children learn.
- Social cognitivism and modeling.

Outline of the lecture:

- **Conceptual change**
- **Teacher growth**

- **How do humans learn**
- **Beliefs on learning**
- **Modeling effects**
- **Modeling process • Social cognitivism**

Most of the times, teachers required memorization of the facts and concepts from students.

Howard Gardner is very famous because of his theory of multiple intelligences. He says,

“Even students who have been well trained and who exhibit all the signs of success . . . typically do not display an adequate understanding of the materials and concepts with which they have been working.”

Conceptual change:

What actually most of the teachers do is that they focus on the **missing knowledge** of the students instead of conceptual change. Conceptual change is important but it does require time. It is difficult to accomplish conceptual change. We must not provide the students with superficial knowledge but the deep learning is a conceptual change.

(Teacher is more interested in covering the syllabus instead of bringing conceptual change in the students)

Teacher growth:

Teacher growth is also a conceptual change:

Knowledge + Experience + Reflection = Growth

If any single element is eliminated or missed from the above statement then it is not growth. If you have knowledge and experience, it is necessary for growth that whatever you have gained from your experience you must reflect on that. E.g. if you teach mathematics to grade 2 students a year and then you are supposed to teach mathematics again in the next year to grade 2. You have same notes and textbooks that you used earlier. You teach mathematics to grade 2 for the next 5 years in the same way then there is no growth. You are just using your experience but there is no change. But if a teacher gains experience to teach mathematics to grade 2 students and at the end, reflect upon his experience is actually growth. By the end of the year, he will think that what techniques must be use to improve students learning. What motivational strategies work and which motivational strategies do not work. These things are actually part of your reflection. If you are reflecting on the things, it means that you will teach the students the next year in a much improved way. It means that you are developing yourself professionally. So, teacher growth is also a conceptual change and it requires three elements. These are: knowledge, experience and reflection.

How do humans learn?

Before we discuss theories on how children learn, there are some questions that must be taken into consideration. And there answers will be discussed through theories.

1. How does a child learn to talk?
2. How did you learn different skills like cooking/ gardening/ stitching/ cycling/ using dictionary?
3. How do people learn to debate?
4. How do people learn to perform in drama?
5. Did you learn multiplication before addition?

Nolan and Francis (1992) believe that:

- **Knowledge is actively constructed by learners.**

If you look at the question # 2, can you learn cooking without you cook? Can you learn stitching without doing it? Can you learn to use dictionary without using it? Definitely, no. so it is true that knowledge is actively constructed by learners. What do we teachers do in the classroom is we start teaching concepts to the students. The students are just listening to the lecture; they are not actively involved in learning.

If you look at the question # 1, that is how a child does learn to talk? If we do not allow a child to talk or to explore different words of vocabulary, he cannot learn a language. It again shows that knowledge is constructed by learners.

- **Prior knowledge greatly influences learning.**

Why is it necessary to learn addition before multiplication? Because multiplication is repeated addition. If a child does not know addition, then he can't learn multiplication. If a prior learning of a student is good, then you can bring conceptual change very easily. It is important for a teacher to know that what is the students' existing knowledge or prior knowledge. Because it actually influences learning. If a student has no prior knowledge about a concept, then he will take more time in getting it. E.g. if a person has seen how to use injection, and you teach him to use it. He will learn quickly as compare to the one who has never seen an injection. So prior knowledge influences learning.

- **Learning is there when teachers try to help learners change their cognitive structures instead of focusing on their own teaching.**

We have to judge the prior knowledge of the students and help them in learning new concepts by recognizing their prior knowledge. So that they may have cognitive change and deep learning. What do we teachers do that we focus on our own teaching e.g. a teacher is asked to cover the syllabus in 2 weeks, his focus will be on covering the syllabus and not on the learning of the students. So, good learning shift on focus to students.

- **Learning is a social endeavor.**

It is said that “**Learning is social by nature.**” It is because learning is enhanced when you are learning in a group. We said in previous lectures that schools have group orientation. It is because the learning in schools is in groups. There are many things that cannot be learnt individually but in groups. In one in one process, a student made a mistake that is corrected by the tutor individually. But when a student makes a mistake in a class, many students learn from that mistake. Whether it was their mistake or not but they learn from them also. So students learn in a social environment. And learning is definitely a social process.

Social cognitivism and modeling:

We will discuss the modeling process in social cognitivism. There are some questions to take into consideration:

1. How does a child learn to hold spoon?
2. How does a child learn to wear clothes?
3. How does a child learn to play?

The answer to these questions can be formulated by a video in which a child is copying an adult in studying, playing and praying. But according to assumptions and from books, the answer to these questions is:

“Much human behavior is learnt by observing the behavior of others (Bandura 1978).”

There are few things that can be learnt by observing others. According to Bandura, there are three things in modeling:

1. Observational learning.
2. Inhibitory effect.
3. Disinhibitory effect.

1. Observational learning:

Observational learning is something that we learn by observing others. There are number of people who learn things by just observing other people. If someone is cooking, you can observe them and learn how to cook food. You can learn cycling by observing, you can learn using computers by observing others. It means that we can learn many things by observation. Teachers are said to be role models because whatever teachers do, students used to copy them and learn. E.g. a small survey was conducted on impressions and it shows that the teacher whose hand writing was very good on the board, his students handwriting was also very good and clear. But a teacher with average or poor handwriting on board shows the poor hand writing of the students as well. This is a new learning that is learnt by observing others.

2. Inhibitory effect:

When you learn something, and then observe others, you think that it is not right. So you left that thing. E.g. if a person is wearing new style clothes, you have bought the same dress as well. When you observe the other person and feel that the dress is not looking nice, you reflect on yourself and think that it might not suits me as well so you stop doing it. This is not a new learning. It is what you leave by observing others. To unlearn something that was learnt.

3. Disinhibitory effect:

Disinhibitory effect takes place when you think that whatever you have learnt is right and you can carry on with it. That is not a new learning. E.g. when a child is writing an alphabet wrong and his teacher is also writing it in the same way. The child gets ensure that the way in which he is writing is right because the teacher is also writing it in the same way. His learning gets strong in this way.

So we may claim that modeling does affect children's learning.

Modeling processes:

There are 4 important modeling processes and research has established these modeling processes. These are:

1. Attention

In order to learn, you need to be paying attention. Anything that detracts your attention is going to have a negative effect on observational learning. If the model is interesting or there is a novel aspect to the situation, you are far more likely to dedicate your full attention to learning.

2. Retention

The ability to store information is also an important part of the learning process. Retention can be affected by a number of factors, but the ability to pull up information later and act on it is vital to observational learning.

3. Production

Once you have paid attention to the model and retained the information, it is time to actually perform the behavior you observed. Further practice of the learned behavior leads to improvement and skill advancement.

4. Motivation

Finally, in order for observational learning to be successful, you have to be motivated to imitate the behavior that has been modeled. Reinforcement and punishment play an important role in motivation. While experiencing these motivators can be highly effective, so can observing other experience some type of reinforcement or punishment?

Modeling can be made very effective if you take care of these four things. These are attention, retention, production and motivation.

And motivation is the most important term or process because attention and retention are the initial levels but motivation takes place throughout the learning process.

There is not only a single way to motivate students. Different teachers use different strategies to make children attentive in the class and make them motivated.

Social cognitivism:

We discuss in the learning theories that learning is an active process. Basically, students can get involved actively alone but the social process is still necessary. Because we are social beings, human beings are social animal and we live in groups. So when we live in groups, our learning will be enhanced due to group orientation.

Comments:

- **Social cognitive theory**, used in psychology, education, and communication, posits that portions of an individual's knowledge acquisition can be directly related to observing others within the context of social interactions, experiences, and outside media influences. In other words, people do not learn new behaviors solely by trying them and either succeeding or failing, but rather, the survival of humanity is dependent upon the replication of the actions of others. Depending on whether people are rewarded or punished for their behavior and the outcome of the behavior, that behavior may be modeled. Further, media provide models for a vast array of people in many different environmental settings.

Lecture # 0

“Learning of Children and Perspectives on Instructional Decision making”

Lecture objectives:

- The prior knowledge and social context of learning as essential conditions of learning.
- Language, learning and development as interwoven areas.
- The three perspectives on instructional decision making:
 - Developmental
 - Behavioral
 - Cognitive

Outline:

- **Prior knowledge and social context of learning as essential conditions of learning.**
- **Zone of Proximal Development (ZPD)**
- **Active learning**
- **Perspectives on instructional decision making**
 - **Developmental perspective**
 - **Behavioural perspective**
 - **Cognitive perspective**

There is a video that shows the students learning. In this video the teachers ask the students to make words using different sounds. We will relate this video to Vygotsky's theory. Vygotsky was a Russian psychologist. He worked a lot on the theories of social constructivism. Vygotsky's theory about prior learning and social context included four major ideas. They are:

1. Children construct their own knowledge.

Most of the time, teachers say the students that the knowledge is present in the book, and you must acquire the knowledge by learning. But Vygotsky says that the students do not acquire knowledge in that way rather they construct their own knowledge. Students can cram knowledge but they cannot construct knowledge.

Vygotsky put a question mark to the following statement: if there is no construction of knowledge by the students, then can we say that students have learnt?

2. Language plays an important role in child's learning.

Language is an important medium for learning. When a child doesn't understand a language then how can he learn a concept? Vygotsky says that when a child born; his ultimate purpose is that he wants to communicate with the people around him. When he starts communicating, he used many words like mama, baba etc. Before he can communicate, he only starts weeping when he is hungry, when he wants to sleep etc. he communicates in weeping. But as the child grows up, he needs to learn language for communication. So, Vygotsky says that unless a child learns a language, it is very difficult for him to learn anything. Language is basically a developmental tool.

3. Learning can lead development:

Learning may be defined as behavioral change or any other change like thinking change etc. Vygotsky says that learning is there only when there is development. E.g. there are some people of the same age i.e. 60 years; you feel that one person is more mature than the other. The one who is more developed seems more mature. His learning or experiences are more than the other person. As a result of those experiences, we think that this person is more mature. On the other hand, a person with fewer experiences seems less mature.

There is a misconception in the Pakistani context, it is said that males are more mature, experienced and developed as compare to the females. It does not mean that females do not have intellect. They can

also be more developed and experienced if they are given an equal opportunity to experience learning, and create their social capital. Their experiences will be equal to that of males and they would be equally developed. So, learning leads to development.

4. Learning/ development cannot be separated from the social context in which it occur:

In the video, you have observed that the students who do not know the English language, don't know what are words producing sound of "pla". But when her peer told her what are those words, she understood and respond well. So, social context is very important. Prior knowledge is also very important. Teacher must try to know the prior knowledge of his students. It is not necessary that if there are 30 students in the class, all of them have the same prior knowledge. So if a teacher tries to teach all students with a same method then all students cannot benefit from it.

Zone of Proximal Development (ZPD):

The gap between actual and potential level of a child is Zone of Proximal Development. Vygotsky is very famous for this concept of his theory.

Actual level is the initial level of child's learning and potential level is the level where a child can stand. The potential level is usually one step ahead the actual level. If student is at the actual level, he has the potential to come up to the potential level. The important role here is of the teacher, if a teacher helps the student, he/she can reach to the potential level very easily. The teacher helps the students at actual level of learning, or at the first level of any learning, it is easier for the student to go one step ahead of that level. When a student is standing at his potential level, he is one step ahead of the previous and needs the support of his adults or teachers again to go ahead of that potential level as well. E.g. if you are teaching mathematics to a student, you teaches him about one-digit addition. You cannot take him straight to the concept of two-digit addition unless he is expert in one-digit addition by practicing it. You teach him the concept of ones and tens here. After he has learned one-digit addition, he couldn't start doing two-digit addition by himself. He needs the help of his elders or teacher to help him. Now the student has jumped from the actual level to the potential level i.e. from one-digit addition to twodigit addition. After that you give him the concept of ones, tens and hundreds, and he can go to the third level by himself i.e. three-digit addition.

Perspectives on Instructional Decision-making:

- **Developmental perspective**
- **Behavioral perspective**
- **Cognitive perspective**

If I am going to teach in a class, I have to decide that what I am going to teach and how it should be taught? How should I assess the students? How can I manage the classroom? All these things are the part of instructional decision-making. The perspectives beyond these decision-making are developmental, behavioral and cognitive. Piaget and Vygotsky are the key people who developed theories. These perspectives are important for the teachers because whatever they are

going to teach to the students they can make decisions accordingly. When teachers will take decisions according to these perspectives, the students will be more important in their eyes.

Developmental perspective:

If we take decisions in the class according to the developmental perspective and notices the theories of Piaget and Vygotsky we will conclude the following.

Piaget's theory:

If followed by his theory, we will say that a child learns by himself. He play with the things, get into different experiences and as a result he learns. Piaget's perspective is stage-wise i.e. a child will learn essential concepts at the first level then moves to the second and learns some other concepts like-wise. E.g. when a child born, he learns to sit at the first level. Then at the second level, his muscles get strong and he starts crawling, after that when his muscles get stronger, he starts walking. When his muscles get stronger then he starts running. These are linear stages of learning that at a particular stage a child will learn this thing and the second at the next level.

Vygotsky's theory:

Vygotsky also says that a child construct his own knowledge. But according to him, social context is very important. He says that it is not a linear process that a child must learn stage-wise.

If a child's social context is so enriched then he can learn many things through his social environment. Whenever I will teach the students according to Vygotsky theory, I will first try to judge their prior knowledge. Unless I don't know that where the students stand I can't help them in development and learning.

Behavioral perspective:

Behavioral perspective means that students may get any change in their behavior. The new concept you are going to teach to a student must be measureable and can be seen from his behavior that the certain concept has been taught. E.g. you taught the students about rural and urban life, after that their observable behavior will be seen when you give them the task to differentiate between urban and rural life. Whatever the difference a child will explain, it will show his behavioral change. If a child doesn't know the differences before, you will notice the change that the child was not aware of the differences but now he is able to identify those differences. It means that the child has learnt. If being a teacher, I will take decisions according to the behavioral perspective then I will merely focus on the direct instruction. I will teach the students in such a way that at the end they are able to show that particular behavior or change in behavior. The preferred teaching methods in this perspective will be lecture method and direct instruction. When you are going to teach to higher classes, then teacher's decision-making comes from behavioral perspective. At that time, it becomes difficult for us to take decisions at developmental level. Lecturing is done with adults, if lecturing is done with children, it may not be useful.

Cognitive perspective:

Cognitive perspective is to develop students' academic and thinking skills from a novice level to a more expert level. Cognitive perspective can be related to ZPD but in that an adult's presence is important. In cognitive perspective,

presence on adult is not necessary but complexity of task is important. If your target is to improve a child's thinking skills, then your task will be of such kind that a child will learn from them. E.g. if we write on board and ask the students to copy that on copies, or if we say that these things are written in your books, learn them, both are very low level tasks. If you want to improve their thinking skill then you need to have projects with them.

Thinking skills can never be improved, unless you do not put them in a situation where they are supposed to think. If a person has high problem solving skill, it means that he has experienced many situations where he has solved many problems and as a result, he has got this higher problem solving skill. So, cognitive perspective says that if a teacher want to take his/her child to a certain level of thinking then we need to provide that range of experience to those people. This perspective include tasks like portfolios, projects, independent tasks, inquiry tasks etc. an important perspective of cognitive development is **Active learning**.

Active learning:

Active learning is where human mind is actively involved in constructing meaning of the experience. When a teacher is teaching in a class, this is not active learning unless there is no questioning in the class. When questions are asked from the students, then actually students construct meanings. A good teacher is the one who engages the students in active learning.

Summary:

- **In order to make students learn something, teachers must first understand how the students are representing a given concept or procedure.**

When we understand that what is the existing knowledge of the students then we can develop them easily.

- **Children do have their prior conceptions and being teachers we should first explore their prior conceptions.**
- **Speech is a powerful psychological tool that lays the foundation for basic structures of thinking later in one's development.**

We have learnt from Vygotsky's theory that speech is a tool as brick is the tool for the foundation of the building; similarly, speech/language is a tool for higher level of thinking.

- **Speech initially arises out of the need for a child to communicate with others who share his/her environment.**

A child speaks by his need. He speaks with the people who are there in his immediate environment. If a stranger comes to them, they usually do not talk in front of him.

- **As a teacher, we should speak and we should use this speech as a tool for learning. We should talk and we should let our children talk.**

Learning can never happen in silence. Where there is silence, there is no learning. According to Vygotsky's theory, language, learning and environment is a social context. They are interlinked

COMMENTS:

- **Complexity of task** means that you give student task independently. He will work independently and will get cognition accordingly. If you give students easy tasks, he will get cognitive development slowly. But if you give him complex tasks, he will ultimately have higher thinking skills.

Lecture # 07 “Kinds of Knowledge and Assumptions of Teachers”

Lecture objectives:

By the end of the lesson, you will have:

- Identified different kinds of knowledge i.e. declarative, procedural and metacognitive.
- Identified lecturing, direct instruction and cooperative learning methods as useful teaching methods.
- Identified some key assumptions of teachers.

Outline:

- **Declarative knowledge**
- **Procedural knowledge**
- **Metacognitive knowledge**
- **Teaching methods use to teach declarative, procedural and metacognitive knowledge.**
- **Key assumptions of teachers**
 - If teachers do not teach, students do not learn.
 - Learners learn best by working alone.
 - Learners need feedback on everything they do.
 - Students’ tests indicate their learning.
 - Intelligence is a fixed capacity.
 - People learn in the same way.

Look at the following learning and place them in three different categories:

1. Using dictionary
2. Types of pollution
3. Dissecting frog
4. History of Pakistan
5. Community service
6. Research on school pollutants
7. Solving problems
8. Working in teams

In category 1: While learning about pollution and types of pollution, you are using your brain whether you are reading books or a teacher is telling you that these are different kinds of pollutants and environmental pollution is caused by these things. These are different ways to stop environmental pollution. These things that you are studying are becoming part of your memory. In the same way, history of Pakistan. To learn different facts and concepts are part of your knowledge. This kind of knowledge is called **Lecturing – Declarative Knowledge**. When you are learning in such a way that you are declaring knowledge. Knowledge that has been declared either in the form of facts or in the form of concepts.

In category 2: There are two things, dissection of frog and using dictionary. Knowledge of such kind is **Direct instruction – Procedural knowledge**. If you want to search any meaning from the dictionary, you need to follow a certain procedure. In the same way, if you want to dissect a frog then you have to follow instructions.

In category 3: There is problem solving, community service, working with others, research on school pollutants. This is a knowledge or skill that if a problem has occurred in front of you then you are able to solve that problem. Working with others doesn't mean that you are working in a group. But you have to solve the problems while working with new kind of people. Similarly, when you are going for a community service, then you are working with the people. If you have learnt to live with the people then you can handle community service. Research is not something that is in your mind that you can conduct research in such a way. But it is actually practically conducting research. This is **Cooperative groups - metacognitive knowledge**.

1. Lecturing – Declarative knowledge:

This is the knowledge that is declared in books, research papers, newspapers or you acquired that knowledge from your elders/teachers. There are two parts in this knowledge: **facts and concepts**. **Facts** are something that you memorize e.g. Pakistan came into being on 14 august 1947, this is a fact and students learn it as it is.

There are many facts in general knowledge books of elementary level, and this is called declarative knowledge because it is the collection of different facts and students memorize it. **Concepts** are Newton's law, rules of grammar, writing patterns, and we say that these are also part of our declarative knowledge. Unfortunately, we

very much focus on this declarative knowledge. We think that this is the most important knowledge and we used to test our students on this knowledge.

2. Direct Instruction – Procedural knowledge:

This knowledge is a step ahead from that declarative knowledge. In which you have acquired the knowledge but still you need to know its procedures as well. E.g. you told a student that a frog is dissected in such a way, and its steps as well. And then you ask him about it by a written test that “what procedure is to be followed while dissecting a frog.” A student gives the answer by stating all the steps of dissection. But procedural knowledge doesn’t mean knowing the procedure, e.g. you know many recipes of baking, may be you have read them in books or listened from anyone. It doesn’t mean that you can cook them as well. Every student has different potential of learning. If you teach them to use dictionary, all students may not use it in the same way. Some students may find the word “Alter” by going through every page of alphabet A. But some will directly browse to the page where words start by AL and will find the word. So, every student has its own procedure to learn something and that is procedural knowledge peculiar to that person. Procedural knowledge is not memorizing the procedures but which you have acquired through doing that procedure. Another thing that is involved in it is practicing. The more you practice, the stronger will be your procedural knowledge.

Teachers are just concentrating on covering the syllabus; they don’t take the students towards procedural knowledge even. We do not allow the students to use the scientific apparatus in the labs. We show them the things in the classroom by demonstrating we are afraid that the students may not handle the apparatus carefully and it may broke. Unless we do not allow them to use the apparatus, there is no procedural knowledge. All the skills are part of the procedural knowledge and these can be learnt only by doing.

3. Cooperative groups – Metacognition:

According to Wikipedia:

“Metacognition is cognition about cognition.” E.g. a child does not know the concept of evaporation, but he learns that what he should do to learn the concept of evaporation. That is metacognition. We categorizes this knowledge and in that the first thing was problem solving, having great declarative knowledge does not mean that you can be a good problem solver. Problem solving is your part of metacognition and it means that in a new situation, you can apply/use your declarative knowledge. You can transfer your learning in a new situation. So this is also called as **transferable skill**. You may call it application of application. Creativity is also a part of metacognition. Learning to learn is metacognition. Metacognitive knowledge is actually of least focus in our schools. There is no focus of metacognitive knowledge in schools rather we teachers are not aware of that.

What are the methods to promote these three kinds of knowledge?

- Lecturing is the procedure to gain declarative knowledge. Because you just need to deliver facts and concepts. There are some teachers who organize group discussions in the class, so declarative knowledge can be gained through discussion also. Through discussion, you can take the students to metacognition as well.
- Procedural knowledge is gained through direct instruction. You have to tell the student directly what he has to do. E.g. when students go into the schools, they learn to write different alphabets. The teacher is telling them how to write different alphabets. A child who is newly admitted in the school could not follow the teacher, if the teacher writes all alphabets on board and asks them to copy. But he has to tell them by holding hand that how to write the alphabets. Hand writing is a skill and to teach this skill to students, teachers need to give them direct instruction by holding their hand and teaching them. So, direct instruction can be useful when you want to give procedural knowledge. You can never give the procedural knowledge through lecturing. Equipment handling is also an example of procedural knowledge. You have to guide every student that how to handle or use the equipment. It is not only that the teacher shows them to use the apparatus. Procedural knowledge is acquired only through practice. So when we are expecting a child to do something or his skills should be improved, then we need to give them direct instruction and feedback.
- Metacognition is gained through problem solving. Definitely, if you do not give the students problems, they can never learn to solve the problems. So we need to give students such activities or tasks that involve their thinking and practical application as well. Team work is an important skill/knowledge that is metacognitive knowledge and it should be taught to the students. You can never give the students this knowledge unless you do not allow the students to work in groups. So, through team work you learn how to work in groups, how to resolve conflicts. Whenever you work in groups, there are many conflicts and disagreements. Metacognition is based on metacognition of declarative knowledge and metacognition of procedural knowledge.

Teacher's assumptions:

1. If teachers do not teach, students do not learn.

Research says that students can learn by themselves, if there is no teacher. It is the responsibility of the teacher to maximize their learning time. They must facilitate the students so that they can reach to the maximum of their potential. This assumption is not true and it is also a misconception, because every student has its prior knowledge and if we do not test their prior knowledge, the students do not participate actively in learning. We think that we are going to teach the students from the beginning but it seems meaningless to them.

2. Learners learn best by working alone.

Whenever we assign students a task, we want them to do it individually. If a student does not know something, we say that ask me, not your peers. We do not allow them to work in groups. There are two attitudes of teachers; firstly, we know that students cannot learn without a teacher, being a teacher we are in a superiority complex that we know everything. Secondly, we say that students can learn individually or by working alone. We should not hold this assumption; we should hold this assumption that learning takes place best when there is some social or group orientation. As we study earlier that **learning is a social process**, if learning is a social process then we need to believe that learning takes place when children work in groups. If students are working alone and they do not succeed. Their self-esteem becomes very low; they think that they cannot have the things done. If they can have a helping hand, their self-esteem becomes higher.

3. Learners need feedback on everything they do.

We always try to give students feedback and that feedback is of very low level that has no educational value. e.g. the words poor, good, excellent are the words used as feedback. We assume that if we do not give feedback, the students cannot learn. We develop attitude in students by feedback, students think that teacher will not check the homework so why we do it. This is because we cannot make learning enjoyable for them. Learning itself is a pleasure process. If the students will do everything for getting good feedback from the teacher, then definitely they will not develop habit of life-long learning. If we want them to be life-long learners we must make them self-motivated.

4. Students' tests indicate their learning.

What do we do in classes; there are tests on our mind every time i.e. weekly tests, monthly tests, mid terms, final exams etc. unfortunately, every examination tests only the factual and conceptual knowledge of the students. And we think that we know who the brilliant students of our class are. It is not true because these tests are not associated with their learning. To test the learning there are many other possible ways, if we want to judge a student in art, we will ask him to draw something on the paper rather we ask him to write down on the paper how to draw things. Similarly, if we want to know how good a student can present, then we will ask him to present something and in this way, we will judge his communication and presentation skill. It is said that English language teaching focuses on four things; speaking, listening, reading and writing. But in our board exams, students' reading comprehension ability and writing is judged.

We only judge their writing skill and never allowed them to speak in English, then how they can have command on English speaking skill. This is also a misconception that students' learning is always assessed by tests.

5. Intelligence is a fixed capacity.

Research says that IQ is not enough. There are multiple intelligence theories which say that every student has his own intelligence. Some students have more special intelligence, some students have interpersonal intelligence. There is a major focus on emotional intelligence. It is expected from schools that teachers must develop the emotional intelligence of the students as well. IQ is a redundant term these days. We make ranking of the students that these students are brilliant, these are of average intelligence and the others are low

achievers. We mostly use the word in the schools and we feel satisfied by the word and that is 'slow learners'. Learning depends on prior learning; everyone can be a slow learner in a new situation.

6. People learn in the same way.

People have different learning styles. But we teachers assume that all students learn in a same way. We use the same teaching method in the class and assume that every student has got the lesson according to our expectations. We are diverse people, we have diverse learning styles. So being teachers it is our responsibility to use those teaching methods by which all students can learn well. We are decision makers; we have the autonomy to decide what we are going to teach and how we are going to teach. How to assess the students. But we have to fulfill our responsibility also that we should teach every student with justice.

So, these are some assumptions that need to be challenged. We have to develop ourselves professionally and the necessary things for growth are knowledge, experience and reflection.

Lecture # 0

“Educational Equity” Lecture objectives:

By the end of the lecture you will have:

- Reflected upon the concept of 'educational equity'
- Reflected upon dimensions of diversity, these dimensions are: socioeconomic, physical, language, ability, and gender.
- Devised ways to promote socioeconomic, physical, language, ability and gender equity in your school.

Outline of the lesson:

- **Educational equity**
- **Kinds of diversity**
 - **Socioeconomic diversity**
 - **Physical diversity**
 - **Ability diversity**
- **Categories of exceptionality**
 - **Intellectual**
 - **Communicative**

- Sensory
- Behavioral
- Physical
- Multiple
- Language diversity
- Strategies to integrate address language diversity
- Gender diversity
 - Gender equity – Stereotypes
 - Research on language equity stereotypes
 - Strategies to avoid gender-bias
- Encouraging equity in classrooms.

(Observe a moss ace in the video lecture that is made by 7 year old children. It was a 10/12 feet moss ace; every student was given A4 size paper to draw different things. Every student draws differently. You will observe that whole moss ace was made up of different components. In the same way, society is made up of different components/people. All the components of the moss ace were of the same size. Every student used the A4 size paper. They were same in the size but the pattern of every component was different. So, we can say that children think differently, so they came up with different designs. One thing more you will observe that the coloring of every drawing is different. Some colored the picture smoothly, while others have white spaces in their drawing. So we can say that children of the same age may have different abilities).

Lessons learnt from the picture:

- The whole is made up of components
- Though components are of the same size but different in patterns and colors.
- Children think differently.
- Children vary in their coloring ability.

(Observe another picture in which the teacher is teaching the students some steps to do. This picture is composed of different kinds of people. Try to identify diversity and multiplicity.) **Lesson learnt from the second picture:**

Children vary in their:

- Height
- Color
- Gender
- Responses
- Moods

- Dressing
- How can we expect them to think the same or perform same?

If there is such variation/diversity, how can we expect them to think the same or perform same? When they are different, they are different in their height, colour, gender, dressing, moods etc. it is definitely impossible to expect from them to perform alike. Being teachers, we need to know this thing and we need to believe in diversity.

Educational Equity

Let's discuss the purpose of schools in the view point of different educationists:

- Schools not only teach the students but also raise them. (Sausa,2003)
- What students are taught in schools affects the ways they will thereafter see and treat others. (Schlesinger, 1993)

To learn the concept of equity, it is necessary to understand diversity first.

Equity means that all students are treated equally well and that all school resources are shared equally. So, equity does not mean treating people equally by snubbing or scolding them. But it means that we must treat them well. Similarly, sharing of resources is also necessary and it must also be shared with every student.

Kinds of Diversity:

- **Socioeconomic diversity**

Socio means related to our society and economic means financially. So, socioeconomic diversity is diversity in family income, parental education, parental occupation and social status in the community.

- **Physical diversity**

Elements of physical diversity are:

- Age: children may vary in their ages.
- Physical attributes: children may vary physically i.e. in their height, weight, colour etc.
- Impairment and disabilities: some students may have weak eye sight; it means that they have eye sight impairment. Some students are unable to walk appropriately or any other impairment or disability. But being teachers, it is important for us to know that people are different physically. Our full attention should not be to the students who are alike in some way or the other but we must know that all students are not equal and provide them with equal facilities in education. If we have some children who have physical impairments or disabilities then we really need to address their needs.

- **Ability diversity**

Ability diversity does not mean that some students have low IQ level or some have high IQ level but it is also seen in the context of **exceptionality**.

Something that is exceptional. There are different definitions of exceptionality up to 27 categories of it. The most important of them are:

Categories of exceptionality:

1. Intellectual

Being teachers, we assume that there is lot of intellectual diversity in our class. It is not true because people have different experiences, IQ level is not much diverse. We say that these students are of high IQ level and others are of low IQ level and we label the students with the term 'slow learners'. We accept that there is intellectual diversity, but we need to know that how we are going to measure intellectual ability in our class.

2. Communicative

Communicative diversity means that students vary in communication skill as well. There are some students who stemmer very fluently, but the teacher needs to know that the students can't do that. It is a responsibility of a teacher to some extent to do speech therapy of the students. But it is not possible for a teacher in a great context. If a student is feeling embraced in speaking while standing in the class then he should be allowed to do written communication.

3. Sensory

Sensory diversity means that is related to your senses. There are some students, who listen loud; some become threatened because of loud voice. We must know that there can be sensory diversity in our class.

4. Behavioral

5. Physical

Physical diversity means that students vary physically i.e. in their height, weight, color etc. physical diversity also comes up with ability.

6. Multiple

In multiple diversity, dyslexia is included. It is a broader term, some students are more dyslexic and some are less dyslexic.

A common thing that is seen in dyslexic children that some used to write 'B' instead of 'D' and some are confused with 'P' as '9'. If we feel that these are the problems with students then we need to address these needs. If you are teaching to grade 2 or grade 3, and students are doing such mistakes then it doesn't mean they are dyslexic. They are at their developmental stage. So information of right and left brain is mixing up. This mixing can force them to do such mistakes. So it is difficult to identify dyslexia before the age of 8 years. Being teachers we need to know that there are certain children who have dyslexia.

Language diversity:

Every child has his own first language. Some have Punjabi as their first language, some have

Pashto, and some have balochi etc. then there comes a second language, some children learn English as their second language while others learn it as a foreign language. So language diversity is definitely present in our classrooms. If most of the books are written in a foreign language then how it may be taught? Students are not able to understand science concepts; the problem is that they do not understand the language in which those concepts are presented. To teach the students language you need to be bilingual, (bilingual means that if you are teaching them English and they know Urdu language, then you need to use both Urdu and English language in class). The research says that this bilingual mood may be ineffective for young children. So another model was presented. That is known as **immersion model**. It means that you immerse the students in the new situation of language. This model says that if you are going to teach the students Urdu language then you should not talk to them in their first language. When you will use Urdu language in the class they will listen and try to speak in Urdu. As Vygotsky says: “**Language plays an important role in learning**”. To know language diversity is important and to address it is more important.

Strategies to integrate address language diversity:

1. Avoid forcing pupils to speak up immediately.

If you want to teach students a new language. Then you must not force them to get immediately to that language. Give them time to think.

2. Give them some print material.

The second strategy that is used is to give them some written/print material. When a child is going to learn a second language, then a child comprehends more on reading material. So if you are providing them with reading material then actually you are facilitating them to understand certain thing and also providing them with vocabulary.

3. Try to talk individually to the students.

There is language diversity in your class in terms of first language of the students and their language ability. When you are addressing the class as a whole then probably students are not going to develop their language ability. You must teach them on one to one basis.

4. Start lesson with simple questions having ‘yes’ or ‘no’ answer.

It doesn't mean that students are learning only yes or no in the language but actually when you are asking those questions, they are listening to the whole question and they are focusing on its vocabulary. They will learn how to ask questions and secondly, they will develop confidence in them.

5. If possible, use satisfactory or unsatisfactory grading.

Grade the students with satisfactory or unsatisfactory instead of ‘fail’ because the word ‘fail’ has a negative effect on the learning of the students. When children come up to a certain level by improvement then use the grading by pass or fail or use the grades A, B or C etc.

Gender diversity:

Gender diversity means difference in gender.

Gender Equity – Stereotypes:

1. Girls start speaking early than boys but later, boys become more sharp and intelligent.
2. Girls/women are gossipy.
3. Girls are less committed to carriers.
4. Girls perform poor in mathematics and science.
5. Girls lack in decision-making so they do not hold key positions in institutes, societies or clubs.

Gender Equity – Research on the above stereotypes:

- A group of teachers and administrators in New Zealand were shown films of classroom discussion and asked who was talking more, the teachers overwhelming response was 'girls'. In reality, boys in the film 'out talked' girls at a ratio of 3:1.
- In a study, it was also shown that men speak more and fluently interrupt women.
- New scientist Magazine reports: 'For the most part, the basic architecture of the brain, and its fundamental workings were thought to be the same for both sexes.'
- Parts of frontal lobe, which houses decision making and problem solving, are proportionally larger in women (Research in Harvard Medical School)

Strategies to avoid gender-bias:

- Call on girls as often as you call boys.
- Pick those texts, pictures and movies which do not instill gender discrimination.
- Rotating responsibilities.
- Provide same learning opportunities to boys and girls.

Encouraging equity in classrooms:

- **Observe carefully:** If the student is performing a task, we must observe carefully about his needs. We must identify his language diversity, physical ability and his behaviour.
- **Set the tone:** We say that teacher is a role model, he is promoting educational equity. And others will learn from him.

- **Involve others:** you must involve others in learning. Unless you do not involve them they will not feel the things. E.g. if you are working for the children who are visually impaired, you will make enlarged photo copies for them and for this purpose you will involve other people. They will also understand that it is to address the diverse needs.
- **Promote autonomy:** The more you make people independent; there will be more educational equity. If you keep people dependent, it means that you are not promoting equity.
- **Organize support groups:** If you are facing any issue of diversity, then you will find the solution by support of other people.
- **Celebrate learning:** To celebrate different ideas and learning of the students and appreciate them.
- **Celebrate diversity:** we have made uniform compulsory in the schools and expect that the students will also be uniform in their thinking. But we need to celebrate diversity.
- **Instill pride in workmanship:** workmanship means that you must be competent in your skill so that you can reach the level of excellence. So we have to take students towards excellence with their diversity.

We are different beings, there is diversity. Being teachers, we need to celebrate diversity. So that we can promote educational equity in our schools.

Comments:

- The term **Dyslexia** is used while explaining multiple diversity among people. But this term is not explained clearly. Dyslexia means: Problems with reading, writing, spelling, symbols and numbers, because the brain misinterprets what it sees (visual) and hears (auditory). Dyslexia DOES NOT affect the intelligence of a person; in fact many dyslexics are highly intelligent. Dyslexia is a disorder of the brain which causes the person to have trouble reading and writing. Although the person is actually smart and can comprehend basics, when it comes to reading, the letters look jumbled up and writing is even worse. It is manageable and a lot of famous people have it and have gotten past it. If someone has it they need help learning and eventually, they can overcome it.

CATEGORIES OF EXCEPTIONALITIES AND DEFINITIONS

BEHAVIOUR

– A learning disorder characterized by specific behavior problems over such a period of time, and to such a marked degree, and of such a nature, as to adversely affect educational performance, and that may be accompanied by one or more of the following: a) an inability to build or maintain interpersonal relationships; b) excessive fears or anxieties; c) a tendency to compulsive reaction; or d) an inability to learn that cannot be traced to intellectual, sensory, or other health factors, or any combination thereof.

COMMUNICATION

Autism— a severe learning disorder that is characterized by” a) disturbances in rate of educational development ability to relate to the environment; mobility; perception; speech and language; b) lack of the representational symbolic behaviour that precedes language.

Deaf and Hard of Hearing – impairment characterized by deficits in language and speech development because of a diminished or non-existent auditory response to sound.

Language Impairment – A learning disorder characterized by an impairment in comprehension and/or use of verbal communication for the written or other symbol system of communication, which may be associated with neurological, psychological, physical, or sensory factors, and which may a) involve one or more of the form, content, and function of language in communication; and b) include one or more of the following: Language delay, disfluency, voice and articulation development, which may or may not be organically or functionally based.

Speech Impairment – A disorder in language formulation that may be associated with neurological, psychological, physical or sensory factors; that involves perceptual motor aspects of transmitting oral messages; and that may be characterized by impairment in articulation, rhythm, and stress.

INTELLECTUAL

Giftedness – An unusually advanced degree of general intellectual ability that required differentiated learning experiences of a depth and breadth beyond those normally provided in their regular school program to satisfy the level of educational potential indicated.

Mild Intellectual Disability - A learning disorder characterized by: a) an ability to profit educationally within a regular class with the aid of considerable curriculum modification and supportive service; b) an ability to profit educationally within a regular class

Because of slow intellectual development; c) a potential for academic learning, independent social adjustment, and economic self-support.

Developmental Disability – A severe learning disorder characterized by: a) an inability to profit from a special education program for students with mild intellectual disabilities because of slow intellectual development’ b) an ability to profit from a special education program that is designed to accommodate slow intellectual development; c) a limited potential for academic learning, independent social adjustment, and economic support.

PHYSICAL

Physical Disability – A condition of such severe physical limitation or deficiency as to require special assistance in learning situation to provide the opportunity for educational achievement equivalent to that of pupils without exceptionalities who are of the same name and age or developmental level.

Blind and Low Vision – A condition of partial or total impairment of sight or vision that even with correction affects educational performance adversely.

MULTIPLE

Multiple Exceptionalities – A combination of learning disorders, impairments, or physical disabilities, that is of such nature as to require, for educational achievement, the services of one or more teachers holding qualification in special education and the provision of support services appropriate for such disorders, impairments, or disabilities.

Lecture # 0

“Planning as a Tool for Successful Instruction” Lecture objectives:

By the end of the lesson, you will have:

- Reflected upon planning as a tool for successful instruction.
- Identified elements of planning
- Identified three domains of learning i.e. cognitive, psychomotor and affective.

Outline:

- **Planning for successful instruction**
- **Key terms used in planning**
 - **Goals**
 - **Objectives**
 - **Instructional objectives**
 - **A strategy**
- **Is planning about decision making?**
- **Elements of planning**
 - **Topic**
 - **Grade level**
 - **Goal**

- **Instructional objectives**
- **Cognitive level check**
- **Students' characteristics**
- **Resources**
- **Assignments or homework**
- **Assessments**
- **Additional learning needs**
- **Time allotted**
- **Domains of learning (CAP)**
 - **Cognitive**
 - **Affective**
 - **Psychomotor**

Planning for successful instruction:

- **Why do we need to plan?** Planning is important as there are three characteristics of master teachers.
- **Master teacher traits:**
 - They are well-organized in their planning.
 - They communicate their instructional objectives effectively to the students.
 - They have high expectations from their students.
- **What to plan as a teacher?**
- **How to plan?**

Key terms used in planning:

- **Goals:** Statement of intent stated in broad term. Goal of a teacher is "A teacher is responsible to produce good citizen." Can we produce good citizens in 40 or 45 minutes lecture? Definitely no. but daily class lecture of 40 minutes can make a long time to achieve a goal.
- **Objectives:** A series of small action steps which are needed to achieve desired goal.
These steps are not integrated, these are in series. When we talk about series, we could not disturb the sequence of it. If any step is missed from it then ultimately we could not achieve that goal.
- **Instructional objectives:** are those objectives which need to be achieved by the end of the lesson.

- **A strategy:** to understand what strategy is, you need to know the difference between method and a strategy
METHOD: To teach certain content to the students. **Strategy:** It is method which helps to achieve your objective

Is planning about decision making?

When a teacher is planning something, is he taking decisions or not? The process of planning is very much decision making process. Firstly, a teacher decides what to teach?

What students will be able to do at the end of the lesson? Secondly, he has to decide what resources are required to achieve certain goal? Which methods will be followed to teach certain content? You need to decide which strategies to be followed to achieve the objectives? And most importantly, you need to decide how much time will be given to a certain step in the lesson? You need to decide which homework should be given to the students? You need to decide how to assess students? So, the process of planning is a decision making process. These decisions are taken by the teacher, if the teacher is not taking such decisions then ultimately, students are going to suffer. Because students will not achieve anything in the class. The 40 or 45 minutes period will not serve the purpose and this time is not maximizing students' learning. All these decisions are the part of decision making.

Elements of planning:

1. **Topic:** What teacher is going to teach?
2. **Grade level:** methods to teach sentence making to primary level students will be different from secondary level students. So it is important for a teacher to know the grade level.
3. **Goal:** the specific subject you are going to teach, you must know its ultimate purpose? What you expect from the students to be able to? Whatever the goals you have selected must be student-oriented.
4. **Instructional objectives:** are those objectives that will be achieved at the end of the lesson. E.g. at the end of the lesson student will be able to label a diagram, or label four parts of a plant etc. Instructional objectives provide you a guideline for selecting teaching method, teaching strategy and resources also. Instructional objectives should be very specific, measurable, attainable, realistic and timed.
5. **Cognitive level check:** being teachers, when we plan a lesson we also decide the strategy by which we can know that what students have learnt till a certain period of time. It is important for the teacher to know that what prior knowledge the students have. Teacher use many strategies to check the cognitive level of the students. Some teachers use questioning method, some teachers go for brainstorming. In brainstorming, a teacher writes some words or questions in a circle and asks the students to response. Students come up with different responses. Teacher does not omit anything, he writes the responses of every student. It is beneficial for the teachers to check the cognitive level of the students. It is also encouraging for the students that whatever they speak, teacher writes on board. In higher classes, questioning is frequently used for this purpose. So, it is important for the teacher to identify the strategy to check the cognitive level of the students.
6. **Students' characteristics:** Students have their own characteristics, there are students who are very good in doing things or they are kinesthetic learners. Some students can learn only by observing. Some students love to listen

to their peers; they learn from their peers, they are auditory learners. So, teachers need to know the characteristics of the students. Students' characteristics are the important elements of planning. It means that we need to decide what we teachers are going to provide for auditory learners, visual learners or kinesthetic learners.

7. Resources: It is important for the teacher to identify the resources that will be used in teaching. E.g. board, activity sheets or multimedia, any other natural resources or classroom resources etc. if you do not plan a lesson and identify resources then ultimately, when you are in class you will be in trouble. Your students will talk a lot and you might face discipline problem.

8. Assignments or homework: teacher has to plan what assignments he/she is going to give to his/her students. What actually happen in our classes, we teach certain things and ask the students to complete the whole exercise in the class, but most of the students are unable to do so. Being a teacher, I will ask them to complete the rest of the questions at home. Homework should be a pre-planned thing; it should not cover the things that students are unable to do in the class. If students are unable to finish the exercise in class then it is a teacher's duty to help them complete the exercise in the next lesson. We should not expect from parents to help their children learn new things. Teachers are responsible to teach the new things to the students.

9. Assessments: we also need to decide that how we will assess the students. What we do is only test the student through questioning. We try to assess every kind of learning through questioning. But it is not possible. E.g. if we want to assess how good your students are at sketching, you cannot ask certain questions from them. You ask student that what the procedure of sketching is.

If a student tells you accurate answer it doesn't mean that he is able to make a sketch. So, you cannot assess the students through questioning, different kind of learning requires different assessment strategy. So when we plan a lesson we must also plan the assessment strategy. The criteria of assessment should be based on the objectives.

10. Additional learning needs: there are students who have additional learning needs; there are some students who have weak eye sight, so you need to plan accordingly. You have to make the font of the worksheets larger. If you will not notice his eye sight, he will not be able to work in the class, readability is not there. It is not the fault of the student but of the resources. Whenever we are planning lessons, we need to take care of additional learning needs.

11. Time allotted: It means that if at the start of the class, we are doing brainstorming in the class then we should decide its time. Will it be for 5 minutes or 10 minutes? Or if we want to have some written task in the class, you have to decide that a written task will be for 20 minutes in the class. So you have to allocate time for every activity in the class. Time allocation should be flexible. If you feel that students need more time on a certain task, you can always give them some more time to that task. But there should be some kind of time allocation while planning lesson.

So, we need to know the key elements of planning, because if we do not know elements of planning then probably we will not be able to plan good lessons. Sometimes we miss very important elements of a lesson plan.

Domains of learning:

- 1. Cognitive (Intellectual development)**
- 2. Affective (Feelings/attitudes or holistic development and metacognition also comes under this category)**
- 3. Psychomotor (Procedural knowledge)**

So, being teachers we need to know these three learning domains. For simplicity we may say we need to give a CAP to each child in our class.

CAP: Cognitive, Affective and Psychomotor.

Have a look at the following and try to put these different kinds of learning under these three domains:

Riding a bicycle, stitching, Essay writing, Speaking, Cooperating, Accommodating different ideas, Respecting each other, Using dictionary, Memorizing facts, solving mathematics sums.

Cognitive domain:

Use of dictionary, Memorizing facts, Solving mathematics sums, Essay writing. These are all intellectual skills. And they are important for the students and teachers and most of our teaching and learning goes in this domain.

Affective domain:

Cooperating, Accommodating different ideas, respecting each other. It is important for every single being, related to any profession. Or in spending the life these things are really important. We are not living in isolation, we work with others and if we do not have life skills, we will not be able to interact with each other. If we are not able to communicate appropriately with them, our learning is deficient.

Psychomotor domain:

Riding a bicycle, Stitching. These are very skill oriented things where our motor muscles are involved. So, anything which involves our motor muscles is called as psychomotor domain. Whatever we do, in all physical activities our mind is always working. This is the domain which involves physical and mental work.

Comments:

- The term 'Master Teacher' is actually a teacher who has expertise on his subject and he ensures the quality learning of the students.

- **Kinesthetic learning** (also known as **tactile learning**) is a learning style in which learning takes place by the student carrying out a physical activity, rather than listening to a lecture or watching a demonstration. People with a kinesthetic learning style are also commonly known as "do-ers".

Lecture # 1

“Bloom’s Taxonomy” Lecture objectives:

By the end of the lecture, you will have:

- **Reflected upon 6 levels of Bloom’s Taxonomy of cognitive domain**
- **Come up with examples of learning at different levels of Bloom’s Taxonomy.**

Outline:

- **Bloom’s taxonomy**
- **Knowledge level learning**
- **Comprehension level learning**
- **Application level learning**
- **Analysis level**
- **Synthesis level**
- **Evaluation level**

First, you have to understand what Bloom’s Taxonomy actually is? Here are 6 different types of learnings below, try to identify the common thing in it.

- **Recalling key names of Pakistan movement**
- **Defining noun**
- **Defining solubility**
- **Telling counting 1 – 20**
- **Naming 7 continents**
- **To tell Newton’s third law of motion**

In all the above, the child has crammed the things that he tells. It does not involve high level thinking skill. These are the facts or principles that he has memorized by learning. If you ask a student any definition and he is using the same words as in the book, there is no thinking involved. He is telling what he has memorized. This level of learning in Bloom’s Taxonomy is called “Knowledge level.”

Bloom’s Taxonomy:

EDU301 Midterm Preparation Short Notes and Quizzes BY PIN2 and MUHAMMAD (MAS All Rounder)

Bloom was an educationist; he has a lot of contributions in identifying different levels of learning. In 1956, he developed his taxonomy but after 55 years, no learning objectives are forms without following his taxonomy. The word 'Taxonomy' shows classification. He says that learning can take place at 6 different levels and these levels are hierarchical. So, the first level of Bloom's Taxonomy was knowledge level or recall level, where actually students recall their knowledge. It is not about a new thing but what they have memorized, they recall it.

Knowledge level:

- It is about recalling of information.
- It is about knowledge of data, events and places.
- Knowledge of major ideas.
- Mastery of subject matter.

According to Bloom, this is the lowest level of learning. In schools we mostly focus on testing of this level. A book is given to students by name of 'General knowledge.' It contains facts and figures and we say to the students to memorize it. So, we do not deny the importance of questions of knowledge level but teachers tend to over use it, and the student who is not good at memorizing, does suffer.

Question cues:

Following are the words which indicate that the question is of knowledge level.

- List
- Define
- Tell
- Describe
- Identify
- Show
- Label
- Who, When, Where.

Comprehension:

Again here are some questions, try to identify the common in them.

- Describe two nation theory?
- State the differences between human eye and camera?
- What are functions of plant, root and stem?
- What did Goldilock do, when she went to bear's house?
- What are our rights and responsibilities as Pakistani citizens?

The common thing in all the above is that the students are provided with the information about certain things first, either the information is provided by the teacher or they are getting that from the books or may be from any other source. And now they are asked to reproduce the given information in their own words. If students do not use their own words, how can we know if students have understood a certain concept or not? This is the level of understanding and in this level, we expect from the students to use their own words. E.g. the translation from Urdu to English or English to Urdu also comes in the comprehension level because we can check the understanding of the students. If words are translated one by one then it is not a comprehension level, comprehension level expects the students to read the text carefully, understand it and then translate it into a new language.

(In knowledge level, we do not expect from the students to use their own words while explaining anything. But in comprehension, first students get certain information and then something is expected from them.)

Comprehension level:

Words often found in comprehension level questions:

- Describe
- Rephrase
- Put in your own words
- Contrast
- Explain the main idea
- Compare

Application level:

Again here are certain questions; you are going to identify common things in these questions:

- **Classify the following materials in transparent, translucent and opaque objects.**
- **Classify the given foods into vegetables, fruits and meat group.**
- **Use the formula.**

Breadth x Length = Area (to find out area of your geometry box).

Children have learnt about transparent, translucent and opaque objects, teacher told them that the objects through which light could not pass are opaque objects. The objects through which the light can pass are transparent objects and the object which allows some light to pass through is translucent object. A child has learnt these things, if he tells the teacher as it is then it is knowledge level. If he tells by using his own words then it is comprehension level. But to use the knowledge in a new situation is application level. Now you give five things to the students to identify these three kinds of objects. These are: Cellophane sheet, paper, table, book, and wall. Now, if the students are able to identify that what are opaque, transparent and translucent objects then they are acquiring application level.

In second question, children are told about the food groups and then they are given different examples of fruits, vegetables and meat and they are asked to classify them. If the children know the exact difference between fruits and vegetables, then they will apply their knowledge and can classify them. If he does not know then the child is not able to classify food items.

In third question, there is a formula to find area. If the students are asked to tell the formula to find out the area, then it is knowledge level. The child knows the formula. But the teacher is saying, children know the formula but it is not enough they must know how to calculate the area, so he asks them to calculate the area of their geometry box. It is application level of learning. Only knowing is not important but to apply it in a new situation.

Application level:

Words often found in application level questions:

- Apply
- Show
- Demonstrate
- Choose
- Illustrate
- Classify
- Use
- Write an example
- Draw diagram
- Observe and record

The three levels discussed above are usually called as lower levels of learning. Students feel difficulty in mathematics because there is application level in it. But educationists say that application level learning is also a lower level of learning. It is although advance from knowledge and comprehension level but it is not so advance learning.

Analysis level:

Again here are certain questions; you are going to identify common things in these questions:

1. What factors did influence Quaid-e-Azam to formulate fourteen points?
2. Why do we need balanced diet?
3. The footprints left by the astronauts, Neil Armstrong and Edwin Aldrin, on the moon in 1969 are still there. Can you explain why?
4. After studying about developments in Malaysia, what can you conclude about the various causes of developments in a country?

In the first three questions, we are asking about the reasons. The reason why Quaid-e-Azam formulate fourteen points? The reason why balanced diet is important? The reason why the footprints are still on the moon? But in the fourth question, reason is not asked. Here you are asked to conclude after seeing the causes of development in Malaysia.

After reading this story how would you categorize the hero's background?

Again here will be some conclusions about how the hero's background influences him.

5. **Vaccination cures body against various diseases. How?**
6. **Why do fish survive better in cool water?**
7. **Human beings are polluting air. How?**

The above three questions are results. E.g. we all know that vaccination cures body against diseases, but the students have to analyze its reasons. It is different from the first three questions in the sense that in them you were asked to identify reasons and conclusions were not given. And in last three questions, conclusions are given and students were asked to give reasons to these conclusions. It is said that analysis is a higher level thinking. When we talk about analysis, there is not one kind of analysis. It is said that analysis is about identifying causes. There are causes but conclusions are also important and the reasons for those conclusions. So, all these go to the analysis level.

Defining analysis level:

"Analysis level questions are higher-order questions that require students to think critically and in depth. Several answers are possible to an analysis-question. Analysis-questions expect from students to identify reasons, reach conclusions and analyze conclusions."

To analyze means to set things apart. E.g. if you teach students about addition, subtraction, multiplication and then division. And while teaching division, you ask them what mathematical operations are involved in division? It is analysis level question, in which the students will tell that both multiplication and subtraction are involved in division.

Word prompts used in analysis level:

- **Identify motives**
- **Why**
- **Compare/ Contrast**
- **Draw conclusions**
- **How**
- **Investigate**
- **Analyze**
- **Summarize**
- **Deduce**
- **Support**

Synthesis level:

Again here are certain questions; you are going to identify common things in these questions:

1. **Write an appropriate title for the text.**

2. Draw a painting to show that pollution is a burning issue.

Here again we are expecting from the child that he will do something on his own. If you have 30 students in the class, you might get 30 different titles to the text. There will not be a single title that you may say is wrong. Because if the title is related to the text then all the titles are acceptable. This level is of the level of creativity. Similarly, in second question, each students will come up with the different idea about pollution is a burning issue. There is not a single right answer,

3. What would happen to our city in next 5 years if steps are not taken to stop air pollution?

4. What would happen to raw milk if it is put in iron containers for a long time?

5. What will happen if stomach does not produce hydrochloric acid?

There is higher level of thinking involved in all the questions given at synthesis level. In the first two questions, we asked the students to create something, weather it is a title of the text or a painting. The next three questions are on prediction. The child is thinking about what will happen to our city, if air pollution is not stopped? Or what will happen to milk, if it is put in an iron container? Etc.

6. Summarize the story including its main idea.

How this summary is different from comprehension and analysis. It is because you ask the students to write the overall summary including the main idea. So students are going to create certain things. Now this question is also related to the first two, in which there is creativity of the students.

7. How can a government solve a problem of narcotics?

8. Design an experiment to prove that light rays travel in straight lines?

9. How can we solve the problem of indoor and outdoor air pollution?

10. How can we remove energy crisis in Pakistan?

All these questions are related to problem solving, weather they are about suggestions, or making designs etc. all students can never give the same solution to these problems. It is the beauty of synthesis level that every student comes up with his own thinking. Important thing in synthesis level is that students solve problems, predict future happenings and at the same time they create certain things. It has a distinction with analysis level that analysis level says to set apart the things and in synthesis level, things are put together. If you say the students to solve a problem, the students will firstly analyze the problem and then solve it. Do remember, problem solving is there in mathematics too, there is only a single right answer in it while in synthesis you can have more than one right answer.

Word prompts used in synthesis level:

- Predict
- Construct
- How can we improve?
- Produce
- Invent

- **Imagine**
- **Create**
- **What would happen if...?**
- **Design**
- **Can you devise..?**
- **Synthesize**
- **How can we solve?**

Evaluation level:

Again here are certain questions; you are going to identify common things in these questions:

- 1. Which Prime Minister of Pakistan was most successful? Why?**
- 2. Discuss that we are not good citizens?**
- 3. Do you agree that more finances would help to raise the literacy rate in Pakistan?**
- 4. Prove that smoking is harmful?**
- 5. Discuss that pollution is individual, national as well as global issue?**

We need to teach our students how to argue? In first question, the student who has more logical answer and can argue on it with others is the best one. If they do not develop the habit to argue, then their higher order thinking skill will not be developed. In second question, we say to the students that it is not a conclusion; it is an argument that we are not good citizens and students have to discuss it. It is not a proven thing; it is different from analysis level. In analysis we give conclusion and then students have to analyze that conclusion. But evaluation level is different; here is an opinion on which you are going to generate a discussion on opinions or on the basis of arguments. There are opinions in the rest of the questions as well and we expect the students to discuss them and generate arguments.

Word prompts used in evaluation level:

- **Judge**
- **Verify**
- **Give your opinion...?**
- **Do you agree**
- **Assess**
- **Would it be better..?**
- **Conclude**
- **Argue**

- Evaluate

Lecture # 1

“Affective and Psychomotor Domain” Lecture objectives:

By the end of the lesson, you will have:

- **Revised Bloom’s taxonomy of Cognitive Domain**
- **Reflected upon Simpson’s taxonomy of Psychomotor Domain**
- **Reflected upon 5 levels of Krathwohl and Bloom’s taxonomy of Affective Domain.**
- **Reflected upon the use of taxonomies as a planning tool.**

Outline:

- **Bloom’s Taxonomy**
- **Psychomotor Domain**
- **Hierarchical levels of Simpson’s psychomotor domain**
 - **Perception**
 - **Set**
 - **Guided Response**
 - **Mechanism**
 - **Complex overt response**
 - **Adaptation**
 - **Origination**
- **Affective Domain**
- **Hierarchical levels of Bloom’s and Krathwohl’s taxonomy of affective domain**
 - **Receiving**

- **Responding**
- **Valuing**
- **Organization**
- **Characterization**
- **Using taxonomies as planning tools** Taxonomies may be used to:
 - **Formulate and sequence objectives**
 - **Develop classroom questions and activities**
 - **Constructing evaluating material**
 - **Taxonomies provide a cognitive structure**

Bloom's taxonomy:

There are 6 levels of Bloom's taxonomy of cognitive domain. Knowledge is the first level, then comprehension, and then application. These three levels are categorized as lower level of learning. The next three levels, i.e. analysis, synthesis and evaluation are categorized as the higher level of learning. Bloom's taxonomy is still teach to the students but there are many adaptations of it. One of these is: the three levels, which are knowledge, comprehension and application, are in hierarchy but the other levels: analysis, synthesis and evaluation are not hierarchical. It is difficult to say which level is higher than the other. So, in a new adaptation, these three levels are not placed at hierarchy but said that these are the higher order thinking

skills.

What we do in schools, we never focus on the higher level of learning. There are few teachers who take their students to the level of higher level thinking. Mostly, what happens in schools is that we are asked to memorize things. In mathematics, we are asked to apply learnt formulas and solve problems. Analysis, synthesis and evaluation are never taken into consideration. We teachers maximum want to make our tasks easier, so if all students will right the same answer, copy checking will be easy for us. This is a major reason why teachers do not allow the students to work on the higher level learning skills. But being a good teacher, my focus must be on students learning and not on the easiness of us. We must take the students towards their intellectual growth. Intellectual growth cannot take place unless we do not provide opportunities to our students to think at high level.

“Psychomotor Domain”

Psychomotor domain is the domain where your body movements are involved. There is learning also, if we are drawing painting or writing something, our muscles are involved in it. Some students are very good at writing but others are not, because we do not provide opportunities to them so that they can learn in this domain.

Hierarchical levels of Simpson's Psychomotor Domain:

1. **Perception**
2. **Set**

- 3. Guided Response**
- 4. Mechanism**
- 5. Complex overt Response**
- 6. Adaptation**
- 7. Origination**

1. Perception:

Perception means attending to a stimulus. There is something happening in your surrounding, and you are noticing that stimulus. E.g. if you are listening, it means that you are actually attending to that stimulus. This is a very theoretical level because a child is not applying knowledge. Simpson identified this level because a child first see and then starts his body movement. E.g. if I want to learn to drive a car, I will notice someone else driving, or I will ask someone how to drive? I will actually attend to that stimulus by listening.

2. Set:

Set is a readiness for action. You show willingness to do a particular task. A child is understanding and comprehending and also trying to demonstrate it in some way. E.g. in a house, if there are people who are interested in studying, a child will notice them. If his father is reading newspaper, he will notice him (Perception stage). He will try to imitate, although he could not read the newspaper but he is trying to read. There is a level in between perception and imitation that he takes the book or newspaper in his hands. There is no action at this level but the readiness to do an action.

In the first two levels of Simpson's hierarchy, you will notice that there is no physical activity involved. But only the understanding of physical activity.

3. Guided Response/ Imitation:

The word 'guided' indicate something, a child is responding in the form of action but this action is not an independent action. This action is a guided action. E.g. when a child starts writing alphabets, he could not write them by himself. Sometimes a teacher had to hold a child's hand to teach him how to write alphabets in the beginning. Unless you do not provide a child with guided response, he could not work independently. So, this is a guided response where a child imitates, tries to perform an action, may be in a very new way.

4. Mechanism:

There are different mechanics to do different things. Mechanism indicates that a child is independent to do a task by following its mechanics. A child may not be able to perform a task independently unless we are not providing that particular opportunity to him.

5. Complex overt response:

Word 'complex' shows that here the child can do many things independently. In mechanism, a child is independent to do a certain task by following its mechanics, but in complex response, a child can work independently. He will work very smoothly and swiftly to perform a particular task. E.g. a child can write alphabets by following its mechanics independently, but in complex response, a child must be able to write alphabets in joining writing very speedily and smoothly. Small children write words in joining writing very slowly, because there is no complex response. To take a child to complex response, we need to provide them with practicing. If we do not provide them with practice they can never reach the complex response. As a result, children may keep growing in age but they are unable to write quickly.

6. Adaptation:

Adaptation comes from the word 'Adapt' which means to set yourself in the given situation. Altering motor activities to meet demands of problematic situations.

7. Origination:

Origination means something very original. This is the level where a child can originate things on his own. He can create many things. If he is able to write at mechanics level. Then he is able to write joining writing in complex response. He can make changes in what he writes at the adaptation level. And now here in origination level, e.g. if he knows calligraphy, he can create new style of calligraphy. This is the highest level of Simpson's hierarchy.

“Affective Domain”

Hierarchy of affective domain was developed by Bloom and Krathwohl in 1964. Affective domain is about developing certain attitudes and dispositions. They both identified 5 levels that are important in the learning of affective domain.

Hierarchical levels of Bloom's and Krathwohl's taxonomy:

- 1. Receiving**
- 2. Responding**
- 3. Valuing**
- 4. Organization**
- 5. Characterization**

1. Receiving:

Being aware of or sensitive to the existence of certain ideas, material or phenomena and being willing to tolerate them. E.g. a teacher told the students about balance diet and that they should avoid junk food. It means that you have received this information from your teacher. So, at this level you do not show anything rather you just receive that information.

1. Responding:

When the teacher is telling you that you must take balanced diet, you need to develop a healthy life style.

So, what you will discuss with the teacher that why it is important to have balanced diet? What are its benefits? Etc. will show that you have not only received the information rather you are responding to that information through your discussion or questioning.

2. Valuing:

Valuing means that the disposition or learning you are talking about, you must value that disposition. You must value by showing certain action. E.g. if your students in a class are taking lunch. Some students bring home make lunch while others are taking junk foods. So you need to show them and appreciate those students who are taking home made lunch. It means that you are practically applying and demonstrating that thing that you value balanced diet and not the junk food.

3. Organization:

This is an advanced level. E.g. we know that honesty is the best policy. First we listen from someone that honesty is a good thing, we discuss it with others as well. If we find a person who is honest, we will appreciate him a lot. But now in organization level, you need to develop honesty in your own. You try to be very honest and try to show honesty in your behavior also. Similarly, as we talk about balanced diet, if a teacher is appreciating students on balanced diet then it means that he values healthy food. But if he himself starts avoiding junk food and start taking healthy food then he has organized himself and now he will prefer eating healthy food instead of junk food.

4. Characterization:

Characterization is different from organization. In organization, you start showing that behavior but that is not a consistent behavior. Characterization means that this behaviour becomes the part of your life. You are recognized by this character. This is the highest level of Bloom's taxonomy of affective domain.

All these taxonomies are the learning tools. We all are planners. When we talk about elements of planning, there is a selection of objectives, selection of activities, selection of resources etc. All these selections depend upon your knowledge of these taxonomies.

“Using taxonomies as planning tools”

Taxonomy may be used to:

- **Formulate and sequence objectives:** When you are deciding your lesson objectives, you need to decide that which objective needs to be set first and which objective needs to set next. E.g. if I want the students to be a

synthesis level, I must take students to the initial level first and then to take them to the synthesis level. **Sequencing** is also important. We must know that we have to take the students stage by stage in learning. So we must know the taxonomies to create that sequence in learning.

- **Develop classroom questions and activities:** we take many **questions** into consideration while studying about taxonomy of cognitive domain, but if we do not know about the taxonomies then maybe we will be asking knowledge level questions in the class very much. But if we have knowledge of these taxonomies then we will try to ask higher level questions in the class. **Activities** must also be planned according to the taxonomies or according to the objectives set under those taxonomies.

- **Constructing evaluating materials:** how we can assess the students as well as our teaching. We need evaluation instruments to assess students and teaching. Evaluation instruments will always be developed when we have knowledge about these taxonomies. E.g. if I want to evaluate the students in their sketching then I must know the taxonomies, if I have decided to assess the students at mechanism level, then I must be having a different check list to assess them. But if I want to assess them at origination level, then my check list will be totally different. So if I do not know about the taxonomies, then I will assess them as whether they have sketched something or not. Taxonomies are important to learn because we will know the level of students learning.

- **“Taxonomies may be used to decide what to teach, how to teach and how to evaluate teaching.” (Marzano, Pickering, and Pollock 2001)**

- **Research shows that learning does not take place if presented in isolated items (Hohn 1995)**

- **Taxonomies provide a cognitive structure.**

Here are two important things mentioned that learning cannot take place in isolation and taxonomies give a cognitive structure.

There are some students who are studying grade level 6 but still they do not know the basic mathematics, and now they are learning algebra. So, when we are trying to teach them algebra, we do not identify the gaps. We try to give them a new learning. Unless they do not learn their missing knowledge, we cannot teach them new things. We must know assess them on their missing knowledge but we must try to identify the diagnostic factors.

In most of the schools, English learning is done in isolation. Some idioms are taught, some vocabulary or essay writing and other things are said to be memorized. So, as a result, we are unable to write an argumentative

essay in our graduation exams. If we have knowledge of different taxonomies of learning, then at least we are going to provide things in integrated way to our students. We can take the students into cognitive structure.

We cannot teach the students in isolation. We need to teach them in an integrated fashion. These leaning domains see the things in sequence. They can relate things with each other. If being teachers, we do not know about the taxonomies then we are making students

learn in bits and parts.

Lecture # 1

“Performance Objectives” Lecture objectives:

By the end of the lecture, you will have:

- Differentiated between measureable and non-measureable objectives.
- Identified three necessary elements of performance objectives i.e. performance statement, condition and criterion measure.
- Reflected upon curriculum alignment as a rationale for performance objectives.
- Reflected upon limitations of objectives.

Outline:

- **Performance objectives**
 - Objectives
- **Elements of performance objectives**
 - Performance
 - Condition
 - Criterion measure
- **Limitations of performance objectives**
- **Assumptions of performance objectives**
- **Curriculum alignment**

(Before we look at performance objectives, **Look at the following objectives and reflect upon**

them if they are clear)

- The learners will draw a right angle triangle. (Not clear)
- The learners will use verbs in sentences. (Not clear)
- The learners will write a letter. (Clear to some extent)
- The learners will identify differences between Pakistan Constitution 1973 and 1956. (Clear)
- The learners will locate countries on world map. (Clear)
- The learners will draw and label human digestive system. (Clear)

(According to today's lecture none of the above is clear objectives. You will come to know by the end of the lesson, why?)

“Performance objectives”

Objectives:

Objectives are intent of teaching.

“The purpose of objective is to communicate the exact intent of a lesson.”

Performance objectives:

“They are precise statements of what you expect students to do.”

Precise statement means an exact statement which tells the teacher, what students will be able to do. Here are three characteristics of performance objectives:

1. Performance
2. Condition
3. Criterion measure

Writing performance objectives:

They have 3 elements:

1. **Performance:** The statement of an observable behavior, or performance, on the part of the learner. They are stated with action verb.

(Here are two things to be taken into consideration. Firstly, these objectives must be student-oriented and secondly, they should be precise. Action words are: write, classify etc. So, whenever we are going to write performance objectives, we need to ensure that we use action word to describe the performance).

2. **Condition:** Condition is a description of the conditions under which learner's performance is to occur. They determine how, when, where and with what of performance.
3. **Criterion measure:** The prescription of a minimally acceptable level of performance or criterion, on the part of the learner.

(Now we are going to compare the objectives discussed at the start of the lesson with those of performance objectives.)

Differences between measureable and non- measureable objectives:

Look at the following objectives and reflect upon them if they are clear:	Performance objectives: 'By the end of the lesson':
- The learners will draw a right angle triangle.	- The learners will draw a right angle triangle with a protector meeting ratio 3, 4, 5
- The learners will write a letter.	- The learners will write a (200- 250) words letter with an appropriate format to a friend independently.
- The learners will identify differences between Pakistan Constitution 1973 and 1956.	- The learners will identify at least 5 differences between Pakistan Constitution 1973 and 1956 by using the textbook.
- The learners will locate countries on world map.	- The learners will locate any country on world map when latitude and longitude values are given.
- The learners will draw and human digestive system label.	- The learners will draw and label accurately at least 5 parts in human digestive system independently.

In all the above performance objectives, there are the three elements present i.e. performance, condition and criterion. Performance objectives are the precise statements of our expectations.

Limitations of performance objectives:

- Objectives have a limited purpose; they are only a means to an end, not an end themselves.
- Teachers can construct technically correct objectives but can fail completely in classroom.

Assumptions of performance objectives:

1. **Learning is change in behavior.** The second name of performance objectives is behavioral objectives. While writing performance objectives, we have to use an action word that exactly shows the behavior. If we are seeing learning in behavioral forms then it is not true that learning is change in behavior. It can be an assumption because it is said to be the limitation of performance objectives.
2. **Learning can be measured.** While writing performance objectives, we focus on the action word because we cannot exactly measure that the learning has taken place or not? So, we believe that learning can be measured. E.g. if a child is listening to a very good discussion, but he did not utter even a single word. It means that we are not measuring the learning. To write performance objectives is necessary, especially when we are going to start teaching. This is not true that if the learning cannot be measured then there is no learning. If someone is reading a book, his learning is not measured, but you need to appreciate him to do such activities. Though being a teacher, I am not able to measure that.
3. **Observed learning outcome is directly linked to the teaching strategy, the content or media used.** Here we assume that whatever a student is learning, actually that all depends upon teacher's teaching. The content that is going to be taught, the resources that are used and the teaching strategy. We totally deny other factors that what is the prior knowledge of the students. What is his background or how many siblings he had? All these things have an effect on students' learning.

While writing performance objectives, we eliminate all these factors and assume that all learning depends upon the teaching strategy, teaching content and the teaching resources.

So, we started seeing classrooms in isolation.

Curriculum Alignment:

Firstly, we are going to have a look on the foundations of curriculum:

There are four steps in Taylor's model of curriculum:

1. What is the purpose of the education?
2. Which educational experiences will attain the purposes?
3. How can these experiences be effectively organized?
4. How can we determine when the purposes are met?

Whenever we are going to write performance objectives, they must be aligned with the curriculum. If your purpose of education is that the students should be empowered citizens. So, the entire objective that you will construct, affective domain will be very important. You will include something from affective domain in your lessons. So, we need to align our performance objectives with the curriculum. Curriculum at different levels; curriculum of the year i.e. short term goals, and to the broader goals that are school goals. Whenever we talk about curriculum alignment, we need to align our performance objectives on these two levels.

It is important for the broader curriculum to identify educational experiences; similarly, it is also important that what educational objectives will be attained at the end of a lesson. Relevant educational experiences are important. When we are planning a lesson, and we have performance objectives mentioned already, then we have to organize those educational experiences that can fulfill the ultimate goal. You have to provide the students with experiences. E.g. if you want the students to have experience of recording something in the lawn. Then firstly, you will ask them to go in the lawn and observe. You cannot give them the experience of recording directly, unless they do not observe the things. You will organize the experience in such a way that you will ask them to first observe and then record. There is assessment in the fourth question, that is, have you attained those goals or not? Whatever you want to assess, that must be against your performance objectives. In performance objectives, all the three elements must be present and you should assess your students according to those three elements.

Lecture # 1

“Levels of Planning” Lecture Objectives:

By the end of the lesson, you will have:

- Identified levels of planning.
- Reflected upon the scope of yearly, unit, and lesson planning.
- Determine link between different levels of planning.

Outline:

- **Planning**
 - **Horizontal dimension of planning**
 - **Vertical dimension of planning**
- **Planning framework**
- **Components of planning - Holistic vision**
 - **Detailed implementation**

- **Instructional vs curriculum planning**
- **Link between formal curriculum and classroom**

Planning:

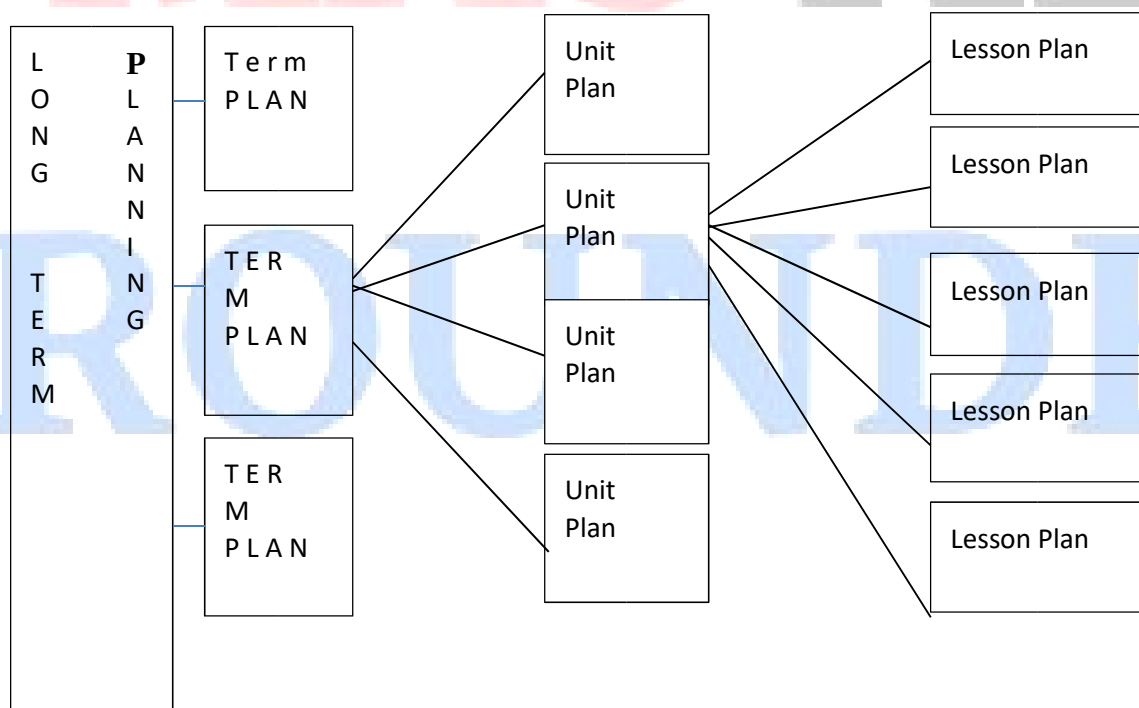
Planning is essentially a nested process with horizontal and vertical dimensions. If a teacher is going to teach in the class without planning a lesson, then he is not a part of process of teaching. As a result, he cannot teach appropriately in the class.

Horizontal dimension of planning:

In horizontal level, planning includes selection of activities, resources, assessment and homework.

Vertical dimension of planning:

In vertical level, it includes link between standards, benchmarks, learning outcomes and instructional objectives.



Planning framework:

Here in the figure, you can see that if we start from school's yearly planning, there is written 'Long term Planning' that is a planning of one year of a school. Teacher is more related to long term planning. The next is 'Term Plan', in some schools there are two terms while others have three terms. So, you have to plan about every term separately.

If we take one term plan into consideration, then it will be consisted of all units of the subject. E.g. if you have to teach 10 units of a subject, then you have to make 10 unit plans. Every unit plan will consist of a number of lesson plans. To achieve the learning outcomes of every unit, we have to construct some instructional objectives. This planning framework is very important for the teachers to understand, because teacher is directly involved in this kind of framework. Teacher is a person who is making lesson plan, unit plan and term plan. Only long term plan is related to the curriculum, the else is the responsibility of a teacher.

Why to write instructional objectives:

Good planning has two components:

- **Holistic vision**
- **Detailed implementation**

Holistic vision comes from curriculum planning while detailed implementation comes from lesson planning. There are standards and benchmarks in curriculum document e.g. a student will come up to certain standard after 12 years or after one year a student will achieve these benchmarks. Your lesson plan makes visible those benchmarks.

What are the commonalities in instructional and curriculum planning?

Instructional vs Curriculum Planning:

Instructional planning	Curriculum Planning
Identifying pupil's needs	Identifying societal needs
Writing and sequencing objectives	Writing standards and benchmarks in a sequence
Selecting methods/ strategies	Benchmarks in sequence
Assessment procedures	Assessment
Resources	Resources

- Curriculum planning is done on the basis of needs of the society. There are three foundations of curriculum sociological, philosophical and psychological. So, your societal needs are identified and on the basis of those need curriculum is developed. While in instructional planning, the needs are identified but these needs are of the students. Firstly, the teachers identify students' needs and then plan a lesson. Teacher needs to differentiate lesson in a way that he addresses pupil's needs.
- Benchmarks and standards are written in a sequence in curriculum planning. E.g. there are benchmarks of grade level 8th or 9th or 10th etc. benchmarks and standards are planned according to the grade level of students. While in instructional planning we write objectives. The instructional objectives must be derived from the standards and benchmarks of curriculum. There should be a link between standards, benchmarks and instructional objectives.

- Methods are also identified in instructional planning. We made sequence of those methods or strategies to be used in the class. While in curriculum planning, we made sequence of benchmarks.
- In curriculum planning, assessment is taken into consideration, it is thought, how to assess the students that which standard is achieved and which is not? Or students reached the level of benchmarks or not? Similarly, in class, the teacher identifies the assessment procedures. Firstly, the teacher identifies assessment criteria. Secondly, he decides how to assess. So, in both cases, the decision of assessment is taken.
- Decisions about resources are taken at both levels. In curriculum planning, you take decision at broader level i.e. in twelve years, how many and what resources will be used for a student? But at lesson planning, you decide what resources are needed to acquire a particular objective.

So, planning is definitely a nested process, starting from curriculum to instructional planning. There are number of things which are interlinked and whenever we are going to plan for a single lesson, we need to look at the bigger picture.

(Here is a curriculum document in which there are different competencies of English. These are reading competency, writing competency, listening competency and speaking competency. In this document there are standards till grade level 12th. I have picked only one standard from them for your understanding. Then one benchmark from grade level 1 & 2. And then learning outcomes from the same grade.)

Link between formal curriculum and classroom:

English

Competency: Reading & thinking skill

Standard:

“To discover and understand a variety of text types through tasks which require multiple reading and thinking strategies for comprehension, fluency and enjoyment.”

If being teacher, I could not understand this standard, and then ultimately, my lesson plan would suffer. So, if we say that a child is given with different texts of reading, then he could differentiate them, understand and discover them as different reading texts. E.g. if you are reading a newspaper, there is reporting in it, news or articles. It has a different text type than of an essay. Or you are reading a narrative story; its text type would be different from that of a newspaper. So

according to the curriculum document of grade level 12th, the first thing is that **students should be able to discover and understand different text types.**

Multiple reading and thinking strategy means that students should know to comprehend a complex task to a certain level. Or if there is a simple text, a student may read it and scan that what was important in the text. So, a student must not only explore the multiple text types and understand them but he should develop some reading strategies in himself. The strategies that are related to comprehension and **fluency**. There are some students who are very fluent readers, but others are not. So, we have to observe students that how they make fluency in their reading through different ways. There is another important thing i.e. **enjoyment**. How students can enjoy the reading and thinking. The standard is not only to know reading or you can think deeply but you can read to the certain level where you can put questions, comprehend it, be fluent in reading and also enjoy it thoroughly.

Benchmarks for grade level 1 & 2:

“Students recognize words and sentences as meaningful units of expression and paragraphs as graphical units of expression.”

The important thing in this benchmark is that the student is able to know the difference between a sentence and a paragraph. He must know that if he is going to say one thing, then it must be used in a sentence. And if he wants to say more than one, then he should know that this thing will go in a paragraph. So, paragraph is an expression of more than one thing that is in a same context.

Learning outcomes:

Students should be able to:

1. Predict story by looking at picture (s) in texts.
2. Locate specific factual information to answer in a word or two or in simple sentences.
3. Guess what follows in the story 4. Follow sequence in a simple procedure.
5. Express likes/ dislikes about the story.
6. Express understanding of story through simple role play.

(Now I have taken the first learning outcome and make possible instructional objectives. These objectives must be attained after the lesson.)

1. Predict story by looking at picture(s) in texts.

Instructional objectives:

By the end of the lesson, the students will be able to:

- Describe first four pictures of Goldilock story with almost 70% accuracy by using the picture cues.

- **Read the sentences aloud with correct pronunciation of the words, with teacher's assistance.**

The next day when teacher continues with the same lesson, his instructional objectives would be: By the end of the lesson, the students will be able to:

- **Answer simple question like was Goldilock a good girl? Whatever she did was that a good thing?**

When teacher will ask such questions in the class, then definitely the students' analysis skill will be developed and refined. All the above objectives have the three elements of performance objectives i.e. performance, condition and criterion measure.

Summary:

Planning is a nested process. So, if we talk about grade level 1 to grade level 12, these are the twelve stairs and a link should be maintained between them. Otherwise, if we are not able to maintain this link, then its ultimate would be that teachers and students would be confused. And after doing graduation even, our children will not be able to read, think or write accurately. So, teachers' responsibility starts from the benchmarks. If you are a mathematics teacher, you need to have a curriculum document of mathematics. There are learning outcomes for unit plans given in it. Observe the learning outcomes, and on the basis of these outcomes, try to identify objectives for all possible lesson plans. When objectives are identified, then you start horizontal planning. In horizontal planning, you have to decide which activities will be organized for the students? What teaching methods will be used? What resources should be used? You have to identify the focusing events i.e. how you will make the students attentive to you? Then you have to identify the procedure of teaching in the class step by step. If you do not write all the above mentioned things in your lesson plan, then it is not a detailed lesson plan. The next thing in horizontal planning is that how will you assess the students in the class? So, my planning is actually interlinked, starting from objectives and going to resources. We also try to know the planning framework and especially the role of teacher in it. Planning has two very important dimensions: one is holistic dimension and the other one is detailed implementation. So, it is said that a teacher is the one who operationalizes the curriculum. Curriculum document is preplanned but the teacher gives life to this curriculum document. Teachers give it life when they are planning and then implementing them in the class. So, teachers' role is very important. They have to maintain the standards of curriculum.

Lecture # 1

“Factors Influencing Planning” Lecture objective:

By the end of the lesson, you will have:

- Identified factors affecting planning.
- These factors include Students, Time, School, Teachers and resources.
- Curriculum guides
- Identified instructional planning procedures like identifying:
 - Pupil's entry skills
 - Planning learning activities

Outline:

- Factors affecting planning
 - Students' considerations
 - Time considerations
 - School considerations
 - Teachers considerations
 - Resource consideration
 - Motivation consideration
- Textbooks and curriculum guide
- Characteristics of good textbooks
- Pre-planning
- Deciding on content and processes
- Identifying entry skills
- Identification of activities

‘Factors which influence planning’ Planning equation:

Less planning leads to less learning (Walsh, 1992)

Planning = Content + Method

This simple equation directly influences learning. If we ignore this equation then ultimately, we are going to the way where there is no learning. When a teacher is going to teach a topic for the first time, he needs to have a detailed and thorough plan. If a teacher had to teach a topic for the second or third time, he doesn't need to see the plan again and again. There is a common assumption that teachers don't need planning, these all are a theoretical point of views and there is no practical importance of them. In fact, this assumption is very wrong. If a teacher is experienced, he still needs planning. The difference is when you are a new teacher; you need to make very detailed plans. When you become an experienced teacher, then actually you don't need to make detailed lesson plans, but still you need to plan your lessons.

What are the considerations of the teachers when they are planning for instruction? (Here are the brief summary of the interviews from the teachers)

Interview: 1 (Slomiat - Teacher):

When I am going to teach the students, I first try to know their prior knowledge. If the students' know how to write the alphabets 'A' and 'B', then I will focus on teaching them the alphabets 'C' and 'D'. I had to check the foundation of the students first, and then I plan my lesson according to their prior foundations.

Interview: 2 (Sehreen Rashid - Teacher)

When we are going to teach, we will plan the entire things first i.e. learning environment, strength and weaknesses of the students, curriculum, allocated time, learning activities, our content knowledge etc. we will plan according to all these factors. Our plan is actually based on a process.

Whenever we talk about considerations, we do not consider them in isolation. One consideration is affecting the other. There is a link in between them. So they are not isolated considerations.

So, there are certain factors which influence planning.

- Students' consideration:

Being a teacher, you need to know your students. You need to know their level of motivation. Does the class work as a group or not? These are all considerations that are important on behalf of students. Most of the times we see that when teachers talk about students' considerations, they mostly focus on the learning styles of the students. Secondly, they focus on the prior knowledge of the students. Teachers do not think more than these two factors but still there are different factors that need to be taken into consideration while planning a lesson.

- Motivation:

A teacher needs to know the motivation level of the students as they need to know their entry level skills. When you are going to teach in a class with lesson planning, you are not only to cover the content. You have to teach them some processes and you need to plan some activities as well. So if you do not know the motivational level of the students then you will not be able to know plan appropriate learning activities for them.

- Content and process considerations:

While yearly planning, you have to see the curriculum framework. Ministry of education has planned curriculum document and in it there are standards till grade level 12, but if you are going to teach to grade 5, you refer to that curriculum document and decide what content you are going to teach to the students. Similarly, you have to see the overall yearly plan for unit planning and lesson planning. It is also important to know about the processes. If I am going to teach the students addition in mathematics, then I must see what thinking processes are involved in it. E.g. if I am teaching them essay writing, then I have to see what processes are also involved while the students are learning to write an essay.

- Time considerations:

We have limited time to teach in a class, a 40 or 45 minutes period. We have to present the content in such a way that if it is a necessary content, how we can complete it in a given time frame.

- School considerations:

Some parents demands that their children must also be engaged in co-curricular activities as well as learning the content. But schools' policy is to cover the content as much as possible. They are unable to provide the students such environment where actually they are participating in co-curricular activities. So the schools want to come up to the demands of the parents but they do not want to compromise on their policies. They must plan it integrated that students can have the activities as well as they can learn the content. E.g. essay writing competitions, which is very much co-curricular activity. But at the same time students are learning certain content through that. For planning such kind of activities, teachers need to consider what are school policies?

- Resource considerations:

If a teacher plans to take the students for field trips, then he needs to consider schools' resources. He needs to know, is there human resource in the school? Is there physical resource present in the school? We have the facility or not? We have the transport or not? We have the drivers or not? How many teachers can go with the students? So she must consider the overall resources.

- Teachers' considerations:

Whenever I am going to plan, whether it is a lesson plan, unit plan or yearly plan. I must know the content selected to teach. If I myself do not know the content properly, then how will I be able to teach that content to my students? If I do not know, then I must seek help from my colleagues. **Content** knowledge is a very important competency of a teacher. I need to be very truthful to myself. **Processes** are also very important in teachers' considerations.

E.g. imagination, it is a thinking process. We want to develop the thinking skill of imagination in our students, so that they learn how to imagine? A teacher must observe himself that how much imagination thinking exists in him.

- Textbooks and curriculum guide:

Textbooks are the ultimate resource for most of the children. And they are the ultimate resource for most of the teachers as well. Curriculum is a very broad term; it includes content, syllabus, activities, assessments and textbooks also. Curriculum guides are planned by Ministry of education in Pakistan. Curriculum guides actually give us a guide line about what to be taught in different grade levels. They do not only focus on the content but also on the processes that must be taught to the students. So, content and processes are there in our curriculum guides.

Whenever I am planning, I must use that curriculum document as a referred document.

Curriculum documents are not available in all schools. But all schools have textbooks. Principally speaking, textbooks are written on curriculum guidelines. So we may say that ideal textbooks are actually mirror image of curriculum guidelines. There are some characteristics of good textbooks:

Good textbooks:

- Provide a structured sequence of lessons.
- To achieve students learning outcomes for different units of study.
- Includes supplementary reading material.
- Have assessment strategies as well
- Have mentioned some activities also.

So, you need to decide which textbooks need to be used for a particular instruction. And how will you align them with the curriculum. These are different considerations which we need to take into account whenever we are planning for our instruction.

Preplanning (Planning before unit and lesson planning):

The yearly plans are already made according to the curriculum guidelines. Curriculum guidelines consist of learning outcomes but not the resources and other activities.

We have to plan all these at different levels i.e. yearly plans, unit plans and lesson plans. Every teacher is supposed to plan unit and lessons, so the stage before planning unit and lesson is called pre-planning stage.

What teachers had to decide at the pre-planning stage is as follows:

- Which content to be covered?
- Which processes to be selected?
- Do students need pre-course instruction to acquire prerequisites?
- Which learning activities seem relevant to goals, content and students' interests?

Deciding on content and processes:

We usually say that content must be taught and we try to get memorized that content to the students. It is very much rote learning. Content is important but processes are also very important. Processes like imagining, problem solving, analyzing, organizing and communicating is actually critical to almost every subject and topic you teach. You must tell the students about the thought processes they are learning. You must communicate your expectations to the students and give them such tasks where actually they experience these processes. So, processes are important, whenever we are teaching our students, we need to focus not only on the content rather on processes also. You cannot isolate process from content. E.g. a child who is very good in problem solving must also be very good in content also.

Identifying entry skills:

We have planned our lesson on writing skills and we are going to teach them how to write an argumentative essay. I need to know if my students know how to write an essay or not? For this purpose, I will give a task to the students to write an essay. I will judge them accordingly that either the students are able to give their main thesis statement? Are they able to write the topic sentence correctly? Can they write proper introduction or not? Can they write conclusion? What is their choice of vocabulary? What are their ideas and sentence structure? I will make check list of all these things to check the entry level skills of the students. We will do diagnostic assessment to check the entry level skills of the students. So, for this purpose, I need to be very clear that what I am going to assess.

When we are assessing the students for entry level skills, we must not give them marks rather we have to diagnose their skills. We are not supposed to scold our students on the basis of that test. The goal of that diagnostic test is that how we can support our students in developing their skills. We have to identify the weaknesses of the students and give them remedial classes.

Identification of activities:

For the identification of resources, we need to plan activities. If we need some resources in lesson 4th or 5th, so we can provide the administration with the list of resources at the beginning, so that they can manage them until we reach to lesson 4th. So, it is important to know and think about activities first.

Lecture # 15 “Unit

Planning”

Outline:

- Unit plan
- Importance of unit plan
- Components of a unit plan
 - Subject/topic
 - Rationale
 - Instructional objectives
 - Content (Facts, Concepts and generalizations)
 - Process
 - Resources
 - Learning activities
 - Evaluation

“Unit Planning”

Unit planning is part of our planning framework. Most of the times, teachers divide their overall content into some manageable instructional units. E.g. a teacher is going to teach mathematics to grade level 6, there will be a yearly plan for grade 6 in which there is algebra, fraction, geometry, percentage etc. concepts are given. Teachers divide the whole content into blocks of the same type i.e. fraction in one block and percentages in the other. The planning of fraction would be different from that of percentages. So, these blocks are called unit plans. Whenever we are dividing our whole instruction into the small units, we need to know how to integrate them altogether.

Importance of unit planning:

“Unit planning is the most important as well as the most time-consuming level of planning for each teacher” (Walsh, 1992).

Unit planning is important because we need to know the reasons for dividing the whole thing into components. Most of the times, teachers’ complaint for shortage of time. This problem can be solved by making the detailed unit plans. You can observe all the topics given in the yearly plan, and then identify the most important topics and the overlapping topics. You can omit the overlapping topics whose level of difficulty is the same as taught previously. So, actually unit planning helps you to go through whole yearly plans.

Components of a unit plan:

1. Subject/ topic

Unit subject is the title of the whole unit. E.g. in science, Human system is the unit; its chapters would be digestive system, circulatory system, nervous system etc.

2. Rationale

Teacher has to decide which content have to be taught and which must be omitted. Whenever you select a topic to teach, there are reasons of it. So, you need to give reasons under the heading of rationale. E.g. a rationale is given in the book named 'Teaching strategies' and that is:

"Understanding a scientific processes and principal is important for every student. Helping students become interested in science at an early age will increase their motivation to want more science as they get older. Additionally, doing science at an early age is an excellent introduction to higher thinking processes as observing, classifying, making inferences and withholding judgement until sufficient data has been gathered. Thus these units on water besides having many informative interesting activities will help prepare students mental for enjoying the observation of the world around them."

3. Instructional objectives

Whenever you are planning a unit, you need to identify the major instructional objectives.

Though you are not supposed to give rationale over here.

4. Content (Facts, concepts and generalizations)

When you give the title of the topic, you have to identify the content also. Make sure while writing the content that you isolate facts, concepts and generalizations clearly. You have to tell exactly that the unit consists of these facts, concepts and generalizations.

5. Processes

You have to identify the processes which the students are going to learn from this unit.

6. Resources

You have to identify the resources which are to be used while teaching a lesson to the students. You have to make a list of the resources and submit that to school administration so that they can manage them properly.

7. Learning activities

Learning activities are different from teaching activities. Teaching activities are there to teach content to the students. While learning activities are there so that pupils experience processes. If you do not identify the learning activities, then students may not be able to learn the identified processes. E.g. experimentation, when students perform experiments then actually they goes through the process. That is a learning activity for them. If teacher would demonstrate the experiment then it would be a teaching activity. Learning activities are those

where students are actively involved. And these activities are important because we do not teach processes to our students unless we do not include learning activities in our lessons.

8. Evaluation

You have to identify the criteria for evaluation. What to evaluate and how to evaluate should be identified in unit planning.

(Here is an example of a unit plan where all the components are described. Observe this lesson plan carefully for your better understanding.)

Unit Subject:

Unit of food (Topic)

Sub-topics: (Content)

- i. Food as a right of every human being ii. Concept of food and diet iii. Variety of food iv. Types of food including whole food, organic food, natural food.
- v. Groups of food which includes carbohydrates, proteins, fat, water, fiber, vitamins and minerals.
- vi. Balanced diet

- **Planning interdisciplinary thematic unit**
- Such planning requires conscious effort to apply knowledge, principles and values to science and English subject simultaneously. **(Rationale)**

Processes:

Imagination, analyzing, recording, interviewing, questioning and then making generalizations and problem solving also.

Learning activities:

1. Concept analysis model will be followed to teach students the concept of food.
2. Direct instruction will be used to teach students how to make custard, steam vegetables, omelet and French fries
3. Students will be asked to investigate food traditions in their families. They will interview their family members and write a report on that and share it with the class.

Unit – Project learning:

Here the teacher divides the students into groups, and ask them to write their names and selected items on the board so that all the students may know it.

1. Arrange a food carnival.
2. Prepare an estimate of the food budget.
3. Identify the place where you will hold carnival (work with your class fellows to decide on it)
4. Divide responsibilities
5. Design and print a brochure to market your food stalls.
6. Prepare a report based on your experience and visitor's impressions.
7. Present the report to the whole class.
8. Upload your reports on school website.

So, this one activity of food carnival is very useful activity in terms of giving opportunity to the students to experience a range of processes. When we are planning our unit, learning activities hold a very prominent position.

(Teacher has also given alternatives that if a food carnival is not possible in school then what activities should be done)

Projects:

1. Growing organic food
2. Making a classroom cookbook
3. Making a cookbook for diabetics
4. Making a cookbook for high cholesterol patients
5. Making cookbooks for high blood pressure patients

Food – Inquiry:

Asking students to inquire dietary habits of 5-8 years old children, 9-15 years old children, 16-25 years old people and 55-70 years old people. Try to investigate the relationship between their dietary habits and their weight.

Discussion:

So, whenever we are planning a unit, we really need to select these learning activities very carefully. And we need to make a match between processes and learning activities. What do we teachers do is that we focus on the completion of the syllabus. This is a wrong assumption because when we plan a lesson, we need to decide on the content which we think is important to teach. And also we have to give a rationale on the content selected.

We do not know that what different processes according to different subjects are. We are not supposed to teach content to the students. Content may be same for all the subjects, subjects may differ according to their processes. So, unit planning is very challenging and time consuming but the most important thing is that good unit planning is a guarantee to effective instruction and effective learning.

We have to identify the facts, concepts and generalizations while planning a unit. In unit plan while writing content, a teacher writes some questions too. It is useful because you can design the learning activities easily.

In evaluation, we discuss that there are two things; criteria and method. So when you are going to assess the processes, you need to adopt alternate methods. E.g. if you want to check whether the students can communicate well or not? You cannot assess them through paper pencil test. Processes can never be assessed through paper and pencil tests. You have to create a check list for assessing communication skills. If you want to assess the students in report writing, give them the task to write a report then analyze it. Processes are usually assessed through analysis method or through observation.

(Here are brief interviews of teachers on their opinion of unit planning)

Interview: 1

Firstly, I consider lesson planning very important and I usually focus on that. But I was failed to develop co-ordination with the class. Then I discuss it with the mentor, he said that you must plan units before lessons. Because that is a root towards lesson planning and you can never develop coordination in the class. It is a bit time consuming activity but it is very important and root towards success. It really helps teachers in adding certain things and in omitting certain things.

Interview: 2

We must plan unit before lesson. All teachers must emphasize on unit planning because if we take both lesson and unit side by side, we can teach the lesson well organized. We can provide useful guidance to the students.

So, teachers most of the times say that it is a useful activity as discussed in the above interviews. You can break the content into blocks but can't integrate it. There must be a link between the interdisciplinary thematic units. When we plan units integrated, we have to assess them integrated as well.

Lecture # 1

“Lesson Plan” Outline:

- Lesson plan
- Components of a lesson plan - Subject
 - Instructional objectives
 - Rationale
 - Content and process
 - Instructional procedures

- Tyler's rationale
- Bloom's taxonomy
- Gagne's plan
- Why to plan a lesson
- Templates of a lesson plan
- Unit plan vs lesson plan

Before we start with lesson planning, here is a task for the students that observe the lesson plan given below and identify, if this is a lesson plan or not?

Task 1:

Read the following and decide if it is a lesson plan?

- Tuesday: 14th February, 2011.
- 1. Review spelling words (5 min)
- 2. Silent reading and underlining difficult words in chapter 15 (10 min)
- 3. Pronouncing difficult words (5 min)
- 4. Discussing meaning of difficult words (10 min)
- 5. Homework (5 min)

In fact, this is not a lesson plan. You might have seen lesson plans in such form. If seen, this may be a plan that in 5 minutes what to do and in next 10 minutes what will be done in class. This lesson plan can be an activity schedule, because activity schedule is something which indicates division of time.

Lesson plan:

1. **Lesson is a piece of a unit NOT a block of time.** If you have decided to teach a unit of light to the students definitely a whole unit of light cannot be taught in one lesson. You need to divide the whole unit in certain pieces. May be you decide to divide the whole unit of light into 10 pieces, so each piece would require a plan. That plan is called lesson plan. Lesson plan is part of the unit plan while activity schedule is part of the block timetable.
2. **A lesson plan is defined as “a systematic design for the development, implementation and evaluation of instruction” (Chatel 2002)**

It is basically “a rehearsal for delivering actual instruction” (Causton – Theohari's et al 2008) So, a lesson plan is a very important document because it tells you what you are going to do in real classroom situation.

Components of a lesson plan:

1. Subject:

Lesson plan starts with the subject. Lesson plan is part of unit plan, so we need to know what the unit title or unit topic is. So that we are able to identify the lesson title. E.g. if we are teaching the unit of light, there can be a lesson, named 'colours' or 'transparent or translucent objects' etc. so the name of the unit must be mentioned in lesson plan.

2. Instructional objectives:

You need to mention the instructional objectives that what the students will achieve after reading the lesson.

3. Rationale:

Rationale means reasons that what the reason behind those specific instructional objectives is?

4. Content and process:

It is very important that when you are identifying the content to teach to the students, you need to identify what skills they are going to learn.

5. Instructional procedures:

While planning a lesson, you divide instructional procedures in 5 different units.

i. Focusing event ii. Teaching procedures

iii. Student activities and participation iv. Formative

check

v. Closure

(Parallel resources)

Lesson planning may be based on different models. Tyler's model is one of the very famous models of curriculum development. As we know, lesson planning is a short term planning. It is part of curriculum planning. So, it can also be based on Tyler's rationale.

Tyler's rationale:

1. What educational purposes should the school seek to attain? (**Defining appropriate learning objectives**).

2. How can learning experiences be selected which are likely to be useful in attaining these objectives? (**Introducing useful learning experiences**).

3. How can learning experiences be organized for effective instruction? (**Organizing experiences to maximize their effect**).
4. How can the effectiveness of learning experiences be evaluated? (**Evaluating the process and revising the areas that were not effective**). (Tyler 1969; John 2006, 484)

If we plan a lesson according to Tyler's model, then the important things in it would be:

Lesson planning:

"A lesson plan defines objective, plans materials, resources and activities are mobilized for the efficient attainment of the selected objectives; and finally, evaluation criteria is also identified."

You actually identify objectives first, and then select activities for attaining them. Select material and resources and go further to decide the criteria on which objectives need to be evaluated. Interestingly, criteria remain the same. If we are going to evaluate the objectives, then naturally, objectives are evaluated against objectives. Objectives actually provide you the criteria for evaluating the lesson.

Bloom's Taxonomy:

Six levels of taxonomy are important in his taxonomy. If you are planning your lesson on these six levels then definitely they will be helpful in identifying your objectives. The important thing in Tyler's model and bloom's taxonomy is that you observe the ultimate behaviors. At the end of the lesson, the students are able to show the particular behaviour or not? In both the models, you identify objectives and then plan activities. And eventually you assess them on objectives.

Gagne's Plan:

Gagne expand the steps of introducing and organizing experience to include a sequence of nine particular "Instructional events" – Events that begin with "gaining attention" and conclude with

"enhancing retention and transfer"

Gagne introduces nine different instructional events and nine different internal processes.

	Internal process	Instructional event
1.	Reception	Gaining attention
2.	Expectancy	Informing learners of the objectives
3.	Retrieval to working memory	Stimulating or recalling prior learning
4.	Selective perception	Presenting the stimulus

5.	Semantic encoding	Providing "Learning guidance"
6.	Responding	Eliciting performance
7.	Reinforcement	Providing feedback
8.	Retrieval and reinforcement	Assessing performance
9.	Retrieval and generalization	Enhancing retention and transfer

1. A teacher should gain attention of the students in the class. If a teacher is unable to gain children's attention, the definitely he will not be able to teach certain things. We need to see what is the internal process that is involved when we are to gain attention of the students i.e. **Reception**. A child starts receiving. If you do not gain attention of the students then the internal process of reception will not start in them.
2. It is not about telling exact objectives, but it is about communicating expectations. In this internal process, students come to know what the teacher is expecting from them.
3. What happens when actually teachers stimulate prior learning of children? Teachers ask questions to judge their prior learning. Its internal process is "retrieval to working memory". Whatever we learn it becomes part of our long term memory. We are going to learn a new thing, maybe there are number of things that are already in our mind but they are not part of our working memory. If the teachers do not try to bring the prior knowledge into working memory then there will not be a connection in new learning.
4. It is important to present the stimulus. In class, learning new thing will be a stimulus. You must attract the student towards new learning by good presentation. When you present, children cannot learn it all at once, there will be selective perception.
5. When teacher provides guidance to the students, then there is semantic encoding. When you present stimulus, there is selective perception.

But when you guide children, there is semantic encoding. Children understand meaning and their mind starts processing the information.

6. Teachers have to identify the methods to monitor the progress of the students. When you ask a question, you expect a response from the child. Here the internal process is to respond. If we are not going to elicit performance, the children definitely will not respond.
7. Giving feedback is equally important. You need to provide feedback so that child improves his/her performance. Its internal process is of reinforcement. When you provide feedback, the students reinforce their learning in mind. Feedback is important to reinforce pupils' learning.
8. Assessment of the students is important so that there will be reinforcement of learning in them. As feedback is important to reinforce pupils' learning, similarly, assessment is also important for reinforcement of pupils' learning. At the same time, assessment serves the purpose of retrieving.
9. The summary you give at the end of the lesson. May be it is of 2 or 3 minutes, and it may not be important for the teacher. But they are very important for the children. Because these minutes actually again help child to transfer information from the working memory to long term memory.

So, we can conclude that lesson plan based on Gagne's model includes these nine essential instructional events. Because it is assumed that these instructional events activate the internal processes.

Why to plan a lesson?

Templates are designed with the intention of "scaffold[ing] the thinking, skills and attitudes of pre-service (student) teachers. (2008, 385).

A lesson plan has a provisional purpose:

- **It helps to develop thinking skills that will be useful in practical teaching preparation.** Lesson planning is essentially a reflective process. Reflective process because you keep in mind that what students have learnt and what they are going to learn. You keep in mind the strengths and weaknesses of the students and then plan the lesson. Identification of objectives is a very difficult task. It really requires a lot of thinking and time. Lesson planning is actually a thinking job and lesson plans develop student teachers or pre-service teachers' thinking skills.

- **It allows teacher trainer to understand the thought process of their student teacher.** From the lesson plans, it can be identified easily that which students are investing their thinking skills more and which are not participating.
- **It can be greatly simplified and abbreviated once these teachers are fully engaged in their teaching practice.** You can also predict that how well a student is going to perform in future as a teacher.

Templates of a lesson plan:

Here are three templates presented and then analyzed them for better understanding.

Bases of lesson plan templates:

	Hunter (USA) 1984	John (UK) 2004	Tru (Canada) 2008
1.	Materials/Resources	Resources	Materials and resources (including behavioural/organizational management strategies)
2.	Anticipatory set (list specific statements or activities which are used to attain students attention)	Starter	Introduction (anticipatory set)
	Objective/purpose(for the students benefit, explain what students will be able to do by the end of the lesson and why these objectives are important to accomplish).	Objectives	Learning outcomes
3.	Input (what information is essential for the student to know before beginning and how will this skill be communicated to students?)	Vocabulary	Preparation

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1. In Hunter, John and Tru's template, the first thing is the resources and material which is common in all the three. Tru added organizational management strategies as resources also.
2. In hunter's template there is anticipatory set, John gives it the name starter and Tru says it as introduction. But the focus of all the three is the same that is how to get the attention of the students. Names are different but the purpose of all the three is the same.
3. Hunter uses the word objective/purposes in his template. John uses only objectives and Tru uses learning outcomes. It is quite confusing for many people that if there is any difference between learning outcomes and objectives. There are some educationists who have tried to identify the difference between the two. But in this template the words learning outcomes and objectives are used parallel. Only Hunter says that there must be a rationale on identification of objectives but the other two did not mention rationale.

Hunter used the word input, John used the word vocabulary and Tru used preparation. Here the role of the teacher is important. Input is basically content.

	Hunter (USA) 1984	John (UK) 2004	Tru (Canada) 2008
4.	Model (if you will be demonstrating the skill or competence, how this will be done?)		
5.	Check for understanding (Identify strategies to be used to determine if students have learned the objectives)		
6.	Guided practice (List activities that will be used to guide student practice and provide a time frame for completing this practice)	Main activity	Student/ teacher activity

	Closure (What method of review and evaluation will be used to complete a lesson)	Plenary/ Assessment of outcomes	Closure
7.	Independent practice (List homework/seatwork assignment to be given to students to ensure they have mastered the skill without teacher guidance.)		

4. Here Hunter identifies model. But John and Tru are silent. They do not identify model in their template.
5. Hunter present check for understanding and its details in template but John and Tru does not define any.
6. Hunter's model is based on Gagne's model. He used guided practice as Gagne do. John used the word main activity for it and Tru used Teacher/ student activity.
7. Hunter used closure in his template while John used Plenary/ assessment of outcomes and Tru used closure.

	Hunter (USA) 1984	John (UK) 2004	Tru (Canada) 2008
8.		Grouping	Extension
9.		Differentiation	Adaptation
10.		Difficulties/Successes	Reflections

8. In these templates, John says that after closure, there is grouping, and Tru says that there is Extension. Hunter is silent in this aspect.
9. John says that there is Differentiation and Tru says that there is adaptation. Hunter is again silent.
10. John says that there are difficulties/ successes and Tru says there is a reflection. Hunter is silent in this respect.

Unit plan vs Lesson plan:

Unit plan	Lesson plan
Subject	Subject
Unit topic	
Lesson topic	Unit topic
Rationale of the topic	Instructional objectives
Instructional objectives	Rationale
Content and processes	Content and processes
Learning activities	Instructional procedures
(Parallel resources)	1. Focusing event 2. Teaching procedures 3. Student activities and participation 4. Formative check 5. Closure (Parallel resources)
Evaluation	Assessment
	Notes

So, there are many similarities because lesson plan is the part of unit plan. Overall we can say that lesson plan is actually detailed form of unit plan. It originates from a unit but it is much in detail.

Lecture # 1

“Lesson Plan Formats” Individual Education

Plans (IEP):

As the name shows that individual education plans are those which are made according to the needs of the individuals. How IEP helps teachers to cater for the learning needs of diverse learners?

IEP is basically an extended adaptation of a lesson plan. The focus in IEP will be on the needs of the learners rather on the content to be taught. Teacher can write simple lesson plans because they are not extended or in much detail. But IEP are written in extended form. E.g. If a teacher writes a plan of a lesson for a whole class then it is a common lesson plan. But if a teacher prepares activities in a lesson plan for the students who have visual or hearing impairment, then it is essentially an individual education plan (IEP).

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The *individualized* part of IEP means that the plan has to be tailored specifically to your child's special needs -- not to the needs of the teacher, or the school, or the district. Goals, modifications, accommodations, personnel, placement, all should be selected, enforced and maintained with the particular needs of your child in mind.

Differentiated instruction: Instruction that is catering for various learning styles and various learning needs.

Effective individual education plans (IEP) have key characteristics. They are:

- Individualized and child centered
- Inclusive
- Holistic
- Collaborative
- Accessible

The IEP must include:

- a. Any needed specialized equipment or materials.
- b. Instructional strategies fitted to the pupil's learning style.
- c. Techniques and activities designed to support the personal and social development of the pupil.

Post Lesson Activities: Most of the times, we teachers think that most important thing in teaching is lesson planning and lesson execution. But post lesson activities must also be included in the lesson plans. **Post Lesson Activities are:**

- Evaluating lesson plans
- Evaluating unit plans
- Record keeping

The evaluation should be in written form not oral evaluation. And teachers need to do that evaluation on the format which is actually attached with the lesson plan. A good teacher is the one who plans a lesson, implement it and evaluate it after implementation.

Evaluation of students' learning:

We need to ask certain questions whenever we are evaluating. Whether we are evaluating our teaching or the learning of our students. Here are certain questions that must be taken into consideration while evaluating students' learning:

- What did my students learn?

- What did students not learn?
- What was interesting for the students?
- What was difficult for the students?
- What evidence do I have for these findings?
- What will children learn in future?

Task 1:

Read the following statements and choose the most appropriate one for evaluation?

1. My students learnt to cooperate.
2. My students learnt to cooperate as they were made to work in groups.
3. My students learnt to cooperate as they resolved their conflicts.
4. My students learnt to resolve conflicts as when they were working in the group, they initially had conflict and asked me to intervene or change groups. When I denied doing so, they in fact tried to resolve their conflicts at their own. All members were smoothly working towards the end of the lesson.

No. 4 is definitely the best evaluation statement. Because evaluation means judgement. A teacher could not give judgement unless she does not have evidence.

Evaluating Teaching:

There are also certain questions that need to be raised and answered while evaluating teaching.

These questions can be:

1. Did I achieve my objectives?
2. Did I build lessons on students' responses?
3. Did I communicate clearly with the students?
4. Did I provide equal learning opportunities to all my students?
5. Did I keep eye contact with the students?
6. Did I give feedback to the pupils constructively?
7. Did I manage time and resources effectively?

Task 2:

Read the following statements and choose the most appropriate one for evaluation?

1. My teaching went very well.

2. My teaching went very well as all students seemed very happy.
 3. I achieved my objectives as indicated by students' responses.
 4. I was able to achieve first two objectives as indicated by students' performance on two questions which were given to them towards the end of the lesson.
- No. 4 is actually a good evaluative statement.**

Do remember, whenever you are going to evaluate your teaching, come up with a judgement but provide sufficient evidence to support your statement.

Post Lesson Activity: “Keeping Notes”

Teachers' notes are different from that of the students, because students prepare notes for preparation of exams. They prepare the notes and then memorize them but when teachers make notes, they keep the detail of the content of the lesson to be taught in the class in those notes. Some part of evaluation is also included in those notes. Keeping notes is a very important type of post lesson activity because a teacher can have the record of his/her teaching.

Purpose of keeping notes:

- To keep record of teaching.
- To plan for future
- To learn from experience
- To communicate with the principal
- To write research report

(Action research is very effective research for teachers, because it aims at improvement. Whenever you want to bring improvement there is always a need for action. When teachers are conducting research, they need evidence.)

Record keeping serves the purpose of future planning and improvement.

Research on lesson planning:

Lesson planning is very important and it has been extensively researched.

1. Researchers have neither identified nor validated any widely accepted or consistently practical planning model. (McBer 2000).
2. Teachers use a variety of lesson plan formats.
3. Planning serves a guide to action.
4. Teachers tend to do much of their planning in minds rather than on paper.

5. Teachers rarely plan in linear model as encouraged in textbooks.
6. The best teachers apply planning flexibly.

Components of a lesson plan:

1. Grade level
2. Topic
3. Instructional aims: Student-oriented
4. Instructional objectives (Instructional aims are broad while instructional objectives are narrow which you have to achieve during a particular time span. The statement of instructional objectives must always begin with: "By the end of the lesson, the students will be able to" This includes objectives that are related to knowledge, skill and attitudes.)
5. Rationale for objectives.
6. Lesson content (Outline of the lesson)
7. Instructional procedures
 - Focusing event (It includes the ways to grab students' attention e.g. games, brainstorming etc.)
 - Teaching procedures
 - Students' participation and activities
 - Formative check (How will you assess the students in class and what feedback will be given to them.)
 - Closure (How will you close the lesson)
8. Assessment
9. Resources needed
10. Teaching notes

Lecture # 1

"Instructional Sequencing" Outline:

- Sequencing • Why to sequence?
- How to sequence?
- Principles of sequencing

- Can we sequence a lesson in one concept?
- Hierarchy of students' success
- Knowledge forms
 - Content
 - Process
- Content forms - Facts
 - Concepts
 - Generalizations
- Facts vs Generalizations

Sequencing:

The art of developing logical plan for instructional activities is called 'sequencing'. Such a plan consists of interlinking steps.

The steps are in progression. They start from simple and go to complex. So, if we start our instruction with complex things and then we move to something simple. We will see that sequencing is not a logical sequencing. It lacks logical plan.

Why to sequence?

- **Helps to make learning more manageable.**

When you are going to teach a child a complex concept or process, you need to isolate it into pieces. You cannot teach a complex concept straight away to the children. You need to divide it into bits and parts because after understanding bits and parts they can understand big picture.

- **Relate information to the bigger picture.**

If we do not sequence the lesson, then student will not be able to understand that what he is going to learn. What are the terminal objectives?

How to sequence?

- **Sequence objectives:** We need to sequence our learning objectives. Being teachers, we are supposed to make lesson plans and unit plans. While making unit and lesson plan, we have to sequence objectives. We should not make teacher-oriented objectives. Objectives should be child centered; they should be student-oriented.
- **Teaching prerequisites:** there is prerequisite for everything you are going to learn. E.g. if we want to teach children essay writing, then we need to know if children know how to write a paragraph. Sentence formation is prerequisite for paragraph writing and for sentence formation, vocabulary is prerequisite. Whenever we are sequencing, we need to know what a prerequisite for a particular terminal objective is.
- **If possible, communicate sequenced objectives to the students to involve them more in the learning process.**

Principles of sequencing:

- **Teacher needs to start lesson with simple steps.** It means that teacher must come up with at least one example so that the students can understand the concept easily. Ideally there should be numerous examples, but to start with, there must be one example.
- **Use concrete examples.** The examples which the students can see and can relate to them their learning.
- **Add complexity to the lesson.** If we are developing the whole lesson on very simple things and we are teaching the basic things, it means that we are not teaching a sequenced lesson. It is important in lesson plan but it should be taken into consideration while planning units that there should be complexity in it. You may start it with simple things but you need to add complexity to the unit.
- **Introduce abstractions. (heart beat and B.P)** Teacher needs to introduce abstractions. Abstractions are something which is not tangible. Abstract thinking is very important. Children should be able to recognize and relate those things which are abstract.

For example, when a teacher is going to teach human circulatory system. Teacher may relate that with river system. The purpose of river system in a country is to supply water to the country. You can relate the river system with human circulatory system because human circulatory system is not visible. While rivers are concrete, children have seen rivers and canals. So if the teacher teaches the students by relating this example then students can understand the human circulatory system at basic level. You can take many other concrete examples like, electricity system or telecommunication system etc. only one example is enough for giving students the basic concept. But to develop the concept more firmly, you need to come up with some more examples. Invite the students that they should also come up with some more examples. In this way you are adding complexity in your lesson. You can add abstractions in this example of circulatory system by telling the student about heart beat or blood pressure.

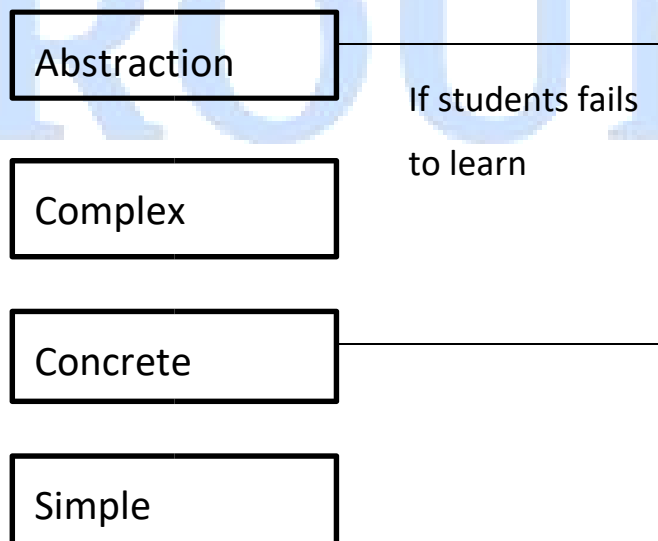
A person who has low or less heart beat can have dangers. So there are basically four principles of sequencing and you have to address them whenever you are sequencing your lesson.

Can we sequence a lesson in one concept?

According to research:

- **Total sequencing time may be 10 years.** There are many concepts that can take years in sequencing e.g. in mathematics, the concept of graphics. It takes at least ten years to understand this concept. There are certain concepts which can be sequenced in one lesson. There are concepts which can be sequence in a week. There are other concepts which can be sequenced in a unit. There are other concepts which can only be sequence in years. This time span is directly proportional to the complexity of a concept.

Hierarchy of students' success:



Recycling mode

Sequencing has different principles; these principles are the introduction of simple concepts. Then concrete examples. Then adding complexity to the lesson and after that taking student to abstraction. But if student fails to understand the abstraction concept, then there is a recycling mode by which the concept can be taught to them through concrete examples.

Knowledge forms:

Knowledge may be simply divided into two forms; one is **content** and the other is **process**.

- **Content is the information, you want your students to learn.**
- **Processes are the motor and thinking skills you want your students to learn.**

Content: example

Kinds of landforms i.e. mountains, valleys, plateaus is content knowledge.

Process: example

- Carrying out an experiment.
- Doing mathematics sums

This kind of knowledge is procedural knowledge.

Content forms:

- **Facts**
- **Concepts**
- **Generalizations**

Facts:

1. Singular in occurrence (describes something important)
2. Occurs or exists in present times
3. Does not help in predicting other facts
4. It is acquired solely through observations

Fact: examples

- Islamabad is capital of Pakistan - Today sun set is 6 p.m.
- There are 5 provinces in Pakistan

Concept:

- They are “category” words which enable us to group many individual objects or ideas under a common label. For example chair, desk, mammal, verb, bird, noun, mountain, **friendship, democracy, love** etc. the highlighted are the abstract concepts. Some are concrete concepts. Learning concepts is quite natural to all human beings.
- All concepts have five essential components: Name, definition, characteristics, examples and place in hierarchy.

Generalization:

- A generalization is an inferential statement that expresses a relationship between two or more concepts. It applies to more than one event and has a predictive and explanatory value.

(When we talk about inferential statement, it means that this statement is derived from somewhere and which is explaining the relationship between one to two concepts. It has a predictive value and explanatory value.)

Example:

People who smoke have a higher incidence of lung cancer than those who don't. It applies to anyone who smokes and has a predictive value.

Facts vs Generalizations:

Facts and generalizations are not the same. Generalizations are basically a relationship between concepts. While facts are singular in occurrence. The difference in both is discussed below:

- Generalizations are inferences that condense a large amount of data while facts are singular in occurrence. For example: Sunset occurs earlier everyday between June 21 and December 21 is a generalization but the sunset at 6 p.m. today is a fact.
- Facts have past or future orientation but generalizations are statements about general trends or patterns.
- Generalizations have predictive value but facts do not have that.

- We need to take our children from factual to conceptual knowledge and from conceptual to generalizations.

Being teachers, we need to take students from facts to generalizations. Because factual knowledge is very simple knowledge. In Bloom's taxonomy, factual knowledge comes at the lowest level of learning. As soon as we add complexity to our lessons, we need to take students towards generalizations. Rather we need to ask our children to make generalizations. We should provide them with the environment that they should be able to come up with generalizations.

Lecture # 1

“Modes of Presentation and Task Analysis Model” Outline:

- **Modes of presentation**
 - **Deductive reasoning (General to specific)**
 - **Inductive reasoning (Specific to general)**
- **Gagne's experience of teaching**
- **Task Analysis Model**
- **Individual Education Plan and Task Analysis Model**

We know that knowledge is of three kinds; declarative knowledge, procedural knowledge and metacognitive knowledge

- **Declarative knowledge:** Facts and concepts are there in this kind of knowledge.
- **Procedural knowledge:** The processes are involved in such learning.
- **Metacognition:** is cognitive about cognition.

Being teachers, we need to give all these kinds of knowledge to our students. There are different ways to deliver knowledge.

Modes of presentation:

- **Deductive reasoning (General to specific)**
- **Inductive reasoning (Specific to general)**

For example, human beings are mortal. This is a very general statement. All men are mortal, and then we say that Ahmad is a man, so he is also mortal. This is deductive reasoning; that you gave general statement first and then goes to specific i.e. Ahmad is mortal because he is also a man.

In inductive reasoning, we start with specific and goes to general. We say that Ahmad is a man and he is mortal. There is another man named Umar, he is also mortal. There is another man; we say he is also mortal. So, we can say that all men are mortal. Then we talk about women and say, Ayesha is a women, she is mortal. Amna is women, she is also mortal. All women are mortal.

Now you say a general statement on all these men and women that is 'All human beings are mortal.' This is known as inductive reasoning.

Here are two columns, try to identify the difference between two modes of presentation

Definition of noun	Brainstorming on names
Characteristics of noun	Examples of names
Examples of noun	Characteristics/ Commonalities in names
Place in hierarchy	Definition of nouns

Children can learn nouns by both the methods explained step by step in the above two columns. But the difference is that the first column is of deductive reasoning i.e. teacher has told a definition and then they are proving the definition by characteristics, examples and place in hierarchy. So, this is a sequence called deductive reasoning.

In second column, inductive reasoning is followed. Teacher asks the students to tell the names of different things. He starts with brainstorming of names of different things. Students may tell the names of places, birds, flowers, animals etc. then he tells the students about what are commonalities i.e. what names are of birds, or animals or places etc. he characterizes it. Then he says that what we have learnt by telling the names is called noun. So noun is the name of a person, place or thing.

- There is a drawback in deductive reasoning i.e. no fair observation. So, if you really want your children to learn skill of observation then actually inductive mode of presentation is better than deductive mode of presentation.
- An important thing in inductive mode of presentation is **Process**. In deductive mode, children learn reasoning and concepts, but in inductive mode, there is also procedural knowledge that is given to the students. They can learn to generalize facts. It is more child-centered. So it is better to use inductive mode of presentation.

Teaching subtraction:

Here is an example, try to analyze if the following steps are sequenced or not?

Analysis to teach subtracting the whole numbers.

Teacher teaches them:

1. Subtracting in simple columns.
2. Subtracting when a "0" is understood.
3. Subtracting one digit number with borrowing.
4. Subtracting when single borrowing is required in any column.
5. Subtracting when several borrowings are required in non-adjacent columns.
6. Subtracting when double borrowing is required (across zero)
7. Subtracting whole number of any size.

Most of the times, the teachers who are very good at sequencing lessons, they sequence their lesson or unit on subtraction in this way. Teacher starts with simple subtraction of simple columns and move to complex subtraction i.e. subtracting whole number of any size.

Gagne's experience:

Gagne taught the students and he was very happy because the students' responses were very good, they were performing very well in class. But what happened in examination? Students did not perform according to his expectations. After that, he observes that what the actual reasons behind it were. Was there any weakness in his teaching? Or there was any problem with students' learning? Actually, his instruction was very much in sequence but not according to the learning hierarchy. Learning hierarchy is that the terminal objectives and goals should be interlinked with intermediate objectives. And those intermediate objectives should be interlinked with the basic skills. This hierarchy was developed by Gagne after his own experience. Gagne was a wonderful teacher in sense that he reflected on his own experience of teaching and then developed a learning hierarchy.

*Task analysis is very important when you are going to give the students procedural knowledge.

You have to analyze the whole task which you are going to teach to the students.

There are some prerequisites and developed things. The most important prerequisite is simple subtraction in this example. There is only one terminal objective i.e. subtract whole number of any size. The other that comes under is intermediate objectives. And then there are basic skills. So, being teachers, we are supposed to sequence our lesson but at the same time we need to analyze the whole task.

Task Analysis Model:

The most important thing in using task analysis model is that we need to:

1. Select an appropriate objective that is at the appropriate age level.

It means that whenever we are going to teach students, any lesson or topic, it should be according to the age level of the students. We must know that the students of this age can do a particular task. E.g. if we talk about addition, you can teach addition before subtraction.

2. Identify the enabling skills students need to attain the objective.

There are two things very common; one is the content to be taught and second is enabling skills. Enabling skills are those skills which are required to achieve a certain goal. E.g. your terminal objective is: by the end of the year, students will be able to write a persuasive essay. Then the enabling skills would be; the students should know how to write an essay, they should know the structure of the paragraph, they should be able to identify a topic sentence in a paragraph, they should be able to write a topic sentence, they should be able to write a thesis statement in an essay etc. So, all these skills are enabling skills.

3. Subdivide independent and dependent enabling skills.

Independent enabling skills are those which are prerequisite actually. They are not dependent on anything. And dependent enabling skills are those which depend on prerequisites. E.g. in English, you are teaching students writing. So, writing a sentence is an independent enabling skill. While writing a paragraph is a dependent enabling skill.

If a child does not know how to write a sentence then definitely the child will not be able to write a paragraph. So, paragraph writing is dependent on sentence writing. Similarly, essay writing is dependent on paragraph writing. Enabling skills are divided into two categories; one is independent skill and the other is dependent skill. Being teachers, when we are analyzing a task, we need to know which skills are dependent and which are independent.

4. Arrange the dependent and independent sequences in order.

It is our assumption that independent skills are prerequisites, so students know them already. We do not need to teach those skills. Research says that if we know that a skill is independent and students know it already we need to test them on their prerequisite. Unless we do not establish their prerequisite, we will not be able to teach them any dependent skill. There are many ways to test the prerequisites, i.e. diagnostic tests, close test, gapping exercise etc. these are the ways to diagnose students reading comprehension abilities. E.g. If the student is unable to read even very simple words then we could not teach them complex reading skills i.e. comprehension. So it is important for the teacher to arrange their sequence of instruction in this order.

5. Sequence specific tasks for the students.

In essay writing, if we set our objective that students will be able to write a persuasive essay after 20 lessons, then we need to identify enabling skills for each lesson. Then we need to identify the task according to those enabling skills. E.g. if your objective is to write an argumentative essay, the first enabling skill for it would be logical reasoning, the second is the difference between fallacy and logical argument, third is the writing skill, fourth is appropriate vocabulary etc. All these skills should be in your mind, you have to list down these things when using task analysis model. After doing this, you have to sequence your instruction and then you will identify which tasks should be given to the students in a sequence. You have to keep in mind your terminal objectives, prerequisites and intermediate objectives. Do remember that intermediate objectives would be much more than the terminal objectives and the prerequisites.

So, task analysis model is a very important model as it helps the teacher to identify prerequisites; it helps the teachers to subdivide the whole unit into small pieces and see which dependent enabling skills need to be developed in students.

Individual Educational Plan and Task Analysis:

Task analysis is important to cater for individual learning needs. Individual educational plans are usually opposite to inclusion. In inclusion, we say that there is same learning for all the students. Individual educational plans are basically constructed for the children who have additional learning needs. There are students with different abilities in your class and you are teaching them by using same strategies, so it means we are not going to do justice with the students who have different learning needs. When we talk about individual learning needs and additional learning needs, it is not necessary that it should be based on the IQ level of the students. There are different students in your class with different prerequisites; you need to test those prerequisites and if the students do not have them, it is the responsibility of the teacher to teach them those independent skills. So in individual educational plan, there is frequent use of task analysis model. Being teachers, we need to make individual educational plans for all the students who have additional learning needs.

Lecture # 2

“Information Processing Theory and Graphic Organization” Outline:

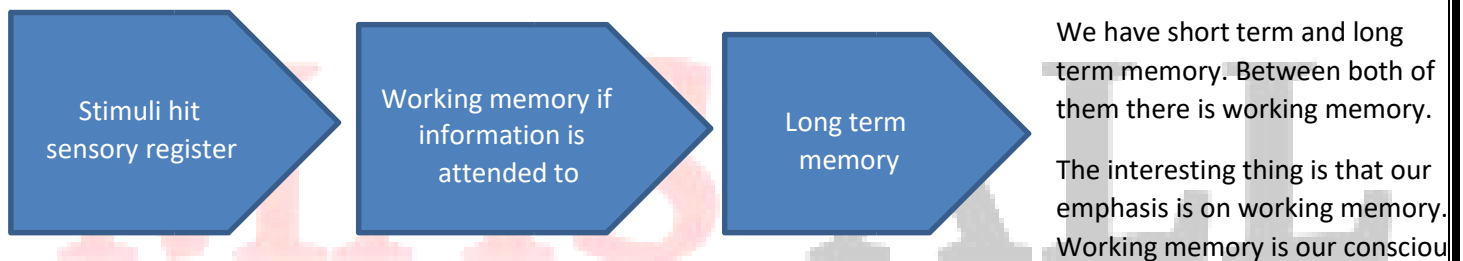
- **Information Processing Theory (IPT)**
 - **Facts of IPT**
 - **Elaboration**
 - **Methods of elaboration - Drawings**
 - **Metaphors and analogies**
 - **Summarizing in your own words**
 - **Questioning**
 - **Ways to use visual tools**
 - **Brainstorming**
 - **Suggestions for brainstorming**

- Comparing and contrasting
- Classification
- Table thinking tool

Declarative knowledge consists of facts, concepts and generalization. Now the question is how to develop the deep understanding of the children. For deep understanding of children information processing theory is very important.

Information Processing Theory (IPT)

Nothing is learnt unless it is in long term memory. Working memory is our conscious memory.



memory. We do not know much about working memory and how it operates. This theory says that every learning should be the part of long term memory. Automation is the ultimate learning. Short term learning is named as sensory register in information processing theory.

Facts of IPT

Humans can keep only 5-9 unrelated pieces of information in their working memory at one time.

If most or all the space in working memory is taken up in lower level skills, higher level thought such as analysis cannot take place. Space is limited in child's mind, teacher has to see this that how he can utilize this space.

By organizing information into related 'chunks' much more information can be held in working memory.

Images are much economical and take less space in our working memory than ideas expressed in words.

A picture is worth a thousand words.

A lot of information can be communicated through a picture. Its example is that if we want to know the address of some place it will be easier to know through map than the oral direction. Nowadays universities or organizations show their maps on their websites for the comfort of the people. Visual tools are very important and significant in learning.

Teachers need to use visual tools very often in instruction to ensure learning.

Increase in the space of working memory

First thing is elaboration. It is very commonly used teaching strategy which helps in developing space in working memory. At the same time information in working memory goes into long term memory.

Elaboration

It is the form of rehearsal but different from maintenance rehearsal (cramming). The former allows us to hold information in conscious working memory just long enough to decide what to do with it. It is not suited for long term storage.

Elaboration means **adding on**. It requires conscious and deliberate thought during which we relate the new information with something already known and understood.

Elaboration is different from maintenance rehearsal. What is maintenance rehearsal? When we learn something, we do some kind of drill to maintain it. When we do or cram something to remember it is called maintenance rehearsal. It never becomes the part of long term memory. When we put something in working memory through maintenance rehearsal it will last till the time it needs.

Methods of Elaboration

Drawings

Children read some text, one situation is that teacher may ask some questions at the end and we can assess the understanding level of children. Second situation is that teacher may ask them to show the pictorial demonstration of the text. It is adding on. Adding on must not be confusing.

Same theme can be represented differently.

Metaphors and Analogies

There is an example of elaboration through metaphor. Teacher teach the concept of cell to students and then ask them to find some metaphors. Below is the table on the left side there are the parts of cell and on right side there are metaphors of football. Different groups gave their different thoughts one group said that cell is like a football game. In the cell the central point is nucleus which holds the whole activity. In football it is the referee who controls the game. Goal keeper's function is also like a cell wall. Mitochondria gives energy to cell. Sports drink also do the same functions. Maybe the teachers have used the task analysis model but they asked the students to elaborate. All the knowledge in working memory will become the part of long term memory through elaboration.

Cell	Football
Nucleus	Referee
Ribosome's	Red and Yellow cards given by the referee for infractions
Cell Wall	Goal keeper

Cell Membrane	Defensive player
Cytoplasm	Game field
Mitochondria	Sports drinks

Summarizing in own words

Questioning

Teacher may ask students to construct questions. Questions of students are more important than the questions of teachers. For example teacher teaches the students a biology lesson and then ask the students to construct four such questions which are not in the book and also not discussed in the class.

Definitely children think a lot because they have to construct those questions which are not in the book but related to the text. Asking question is a skill. It is a skill on student part also. Questioning is very important tool for learning. It helps to take information from the working memory to long term memory. Questioning has a lot of significance value. In elaboration it is an effective strategy.

Ways to use Visual tools

Brainstorming

To describe a thing, a common tool is brainstorming. In brainstorming we write the central information in the middle and then ask students to come up with their ideas, we write everything around that central place. The important thing in brainstorming is that you do not reject ideas. We write every idea; the step of omission comes later. For example we take the central idea of a Fish. And ask the children to come up with their ideas regarding Fish, maybe some children give relevant or some give irrelevant thoughts.

Teacher should remain relaxed while doing brainstorming. In brainstorming we are inviting ideas from students. There will be noise at that time, teacher must be relaxed.

Suggestions

1. Relax
2. Don't worry about organization
3. Think quantity
4. Be positive, don't criticize
5. Keep ideas simple
6. Develop all ideas
7. Keep working

- Combine to improve each other's ideas

Brainstorming is an effective strategy when you are going to gain ideas or describe something. It maybe used for both purposes.

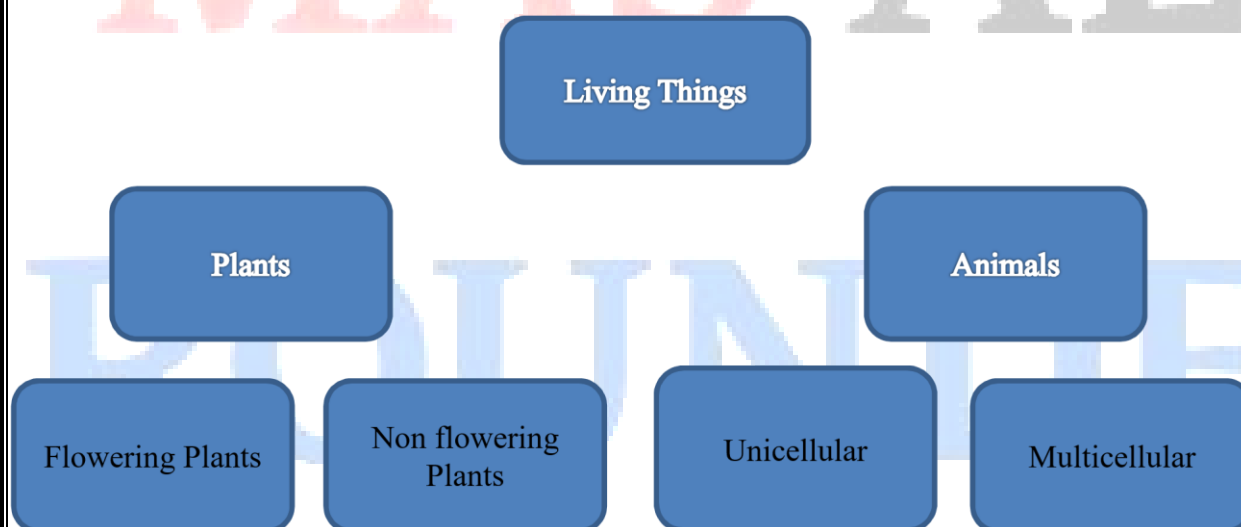
Comparing and Contrasting

Another visual tool is comparing and contrasting. There are a lot of similar or contrast things in spring and summer season. A very important tool for comparing and contrasting is **Venn**

Diagram. Depending upon the concepts, if we have two concepts we use two circles to compare and contrast. Overlapping area will be that area where we will write the similarities. And the areas that are not overlap we will write different things in that.

Classification

This is the visual tool to classify something.



In description form we will have seven unrelated units. This whole information may be presented in one unit in the form of a picture. Children will be able to learn many other things. Images occupy less space in our working memory. Being a teacher, it is always good to use

visual tools.

Table thinking tool.

This tool is for thinking skills. It will be easier to relate the things in the form of table. Below is an example of table thinking tool.

Gas	Liquid	Solid
May be compressed	Take shape	Can not be compressed
Steam	Water	Ice
Cylinder, balloon	Containers	Independent structures

Average students can act like high achievers by using visual tools.

Lecture # 2

“Models of Lesson Organization” Lecture objectives:

By the end of the lecture, you will have reflected upon:

- **Presentation as a useful teaching method to teach concepts and procedures.**
- **Modes of presentation i.e. Inductive and deductive.**
- **Two models of lesson organization i.e. Concept analysis model and Advance organizer.**
- **Identified the use of two models.**

“Presentation is a teaching method where a teacher presents concepts and procedures. This method is used when we are expecting from the students to learn concepts and procedures. In a Task Analysis Model, the children learn procedures, but their conceptual understanding also takes place.

The two methods, Concept Analysis Model and Advanced Organizer are used to teach different concepts to the students. **Concepts are basically ideas; they could be one word ideas, two word ideas, any statements or generalizations.** Some generalizations could be taught through presentations.

Examples of one word concepts are: Beauty, food, energy etc.

“Modes of presentation: Deductive & Inductive”

1. **Deductive mode (General to specific)**
2. **Inductive mode (Specific to general)**

Example of deductive and inductive method:

Deductive method:

Teacher tells the students that ‘**Water is necessary for plants to grow**’. Now the teacher asks them to prove it. He gives them a task to put two plants in the sunlight. Give water daily to one of the plants, and observe them after 15 days and tell which plant grows and which one is withered. Now the students are proving that plants really need water to grow.

Inductive Method:

Here the teacher does not tell the students that water is necessary for plants to grow. He directly gives an experiment to the students; to put two plants in sunlight for 15 days, give water to one of them and leave the other as it is in sun. Give a result after 15 days that what happen to the plants. Now after experimenting, the students will give a conclusion that plants need water to grow, if they give such conclusion then it is definitely an inductive mode of presentation. **Deductive and inductive are not only the modes of presentation but modes of experiments** also.

“Concept Analysis Model as a planning tool”

Concept Analysis Model is a very good model to teach different concepts to the students.

There are five components of a Concept Analysis Model:

Concepts have:

1. A Name
2. Definition
3. Characteristics/ Critical attributes
4. Examples and non-examples
5. **Hierarchy**: it means that some concepts are higher, lower or lies on that concept.
 - **Superordinate concepts**: The concepts which are at upper level.
 - **Coordinate concepts**: The concepts which come under that concept.
 - **Subordinate concepts**: The concepts which are of lower level.

Example: Concept of Noun

Name: Noun

Definition: Name of a thing, place, person or abstract entities (Like birth, happiness, magnetism)

Characteristics:	Endings (painter, scientist, magnetism), most have plurals.
Examples:	River, capitalism, capital, Kamran etc.
Non-examples:	Eating, walking, standing, writing, reading etc.
Superordinate concepts:	Noun comes in Parts of Speech; a Part Of Speech is itself a concept. So, noun lies under this concept.
Coordinate concepts:	All the concepts which lie in parts of speech are all parallel to noun. E.g. adjectives, verbs or adverbs etc.
Subordinate concepts:	The concepts which comes under noun are subordinate concepts. So, the two types of nouns i.e. common noun and proper noun are subordinate concepts of the concept NOUN.

Example: Two teachers are going to teach a concept of noun, one is following deductive mode of presentation and the other is using inductive mode.

1. Deductive mode teacher (example):

Teacher will tell definition of a noun to the students which is usually told in schools is “a noun is a name of a person, place or thing”. Then he will give examples to the students i.e. table, chair, book, board, school, river, Pakistan etc. the students learn this information about a concept of noun. Some teachers will try to give a better definition and will include abstract entities as well.

2. Inductive mode teacher (example):

The teacher who is following inductive mode of presentation will ask the students to tell names of different things. He will write all the names on the board and ask the students to identify the things which end with “ism” or “ist”. He will make groups of both.

The students will identify them and then the teacher will ask them to tell the commonalities in them. Students will make a definition of a noun together. This is inductive mode of presentation. The results which the students gather from the discussion will help the students to create the definition. Teacher will ask them the characteristics of those things. Teacher will ask the students about the subordinate or coordinate concepts of noun instead of telling them.

Teachers can use either inductive mode or deductive mode, but the important thing is to include all the things that are present in the Concept Analysis Model.

Why this model is called Concept Analysis Model?

A concept must be dealt with bits and parts. Every aspect of a concept must be addressed. E.g. its definition, examples, critical attributes or superordinate, coordinate or subordinates etc. So, if any concept is taught by only its definition and examples, it means that we are not doing justice with that particular concept.

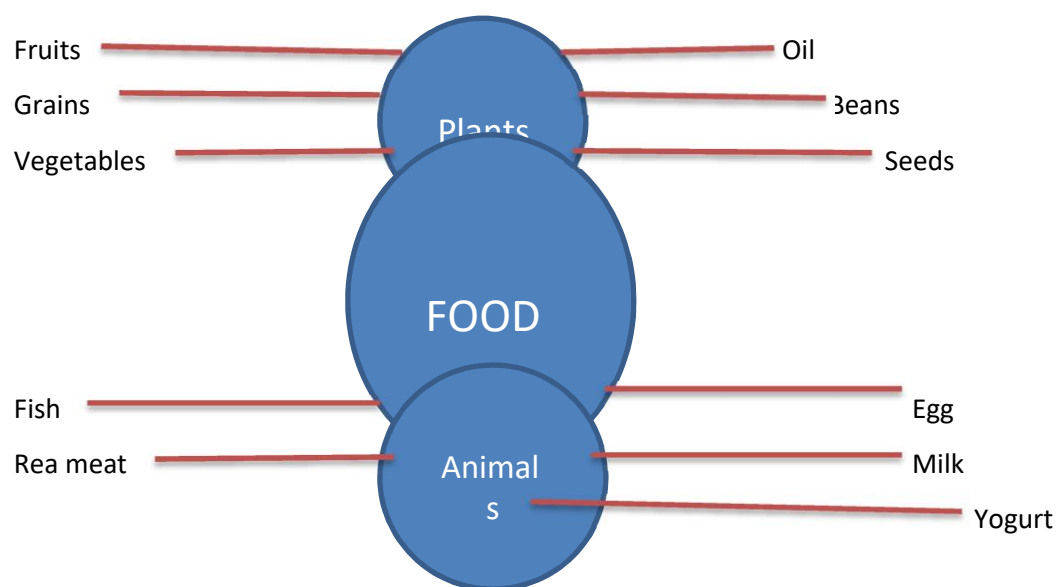
Example: Concept of Food

Name:	Food
Definition:	Food is any substance consumed to provide nutritional support for the body. It is usually of plant or animal origin.
Characteristics:	i. Most foods have taste. Though water is tasteless. ii. Some food is cooked while other not. iii. Sour foods contain organic acids.
Examples:	Vegetables, fruits, milk, egg, fish, rice, water, wheat, chewing gum, chocolate and many more.
Non-examples:	Animal feed, live animals (unless being prepared for sale in a market), plants prior to harvesting is not a food, medicinal products, tobacco, narcotics, cosmetics etc.
Superordinate concepts:	Health & nutrition, food science, food technology.
Coordinate concepts:	Diet, dietary habits.
Subordinate concepts:	Food pyramid, organic food, whole food, natural food, junk food.

So, we have decided that whenever we are going to teach a concept to the students, we need to analyze that thoroughly in terms of its definition, characteristics, examples, non-examples and hierarchy. And we need to ensure that our students understand all these related things regarding a concept so that they can understand that particular concept.

Advance Organizer Model with example:

This is a model which provides you the big picture completely. E.g. If students are going to learn the concept of food, then teacher must have the complete picture of it. You can observe the graphic picture below:



This picture must be presented to the students before teaching them the concept of food. i.e. in advance you present the whole thing to the students. Graphic organizer is also known as **concept map**. Advance organizer can be in the form of graphic organizer, tables and schemes.

Advance Organizer Model:

Advance graphic organizer has three major components or attributes.

- Advance organizer is a statement of those elements that the learner will be required to master in a lesson. i.e. it may be a statement or word e.g. food, noun etc.
- Advance organizer presents 'big picture' to establish relationship between different concepts.
- Advance organizer model is based upon deductive learning.

Advance organizer model is useful for the teachers to communicate their expectations to the students that what actually they are going to learn.

Discussion:

Advance organizer model uses deductive approach but it is part of deduction that when things are isolated, they need to be integrated also. E.g. food. In the example of food, all the things are isolated in the big picture above. When we will integrate it we have to reinforce the concept of food again to the students. After doing all this, a teacher can move to the other concepts to teach. After integrating all the components of a concept, a teacher can ask the students to describe the concept of food in their own words. It is very different from concept analysis model. The major difference in advance organizer and concept analysis model is that when a teacher follows concept analysis model. he has to tell the characteristics, examples, non-examples and hierarchy of a concept. While following advance organizer model, a teacher

don't need to give characteristics, examples, non-examples or hierarchy or even the definition of the concept as well. A teacher only needs to present all those things and students have to understand it. So in advance organizer model, teachers don't need to follow all the things that are followed in concept analysis model.

Advance organizer gives teachers a big picture; they have taught all the components of that big picture to the students by isolating them. After teaching the concepts, the concepts need to be integrated. Concept analysis model is the best model to integrate all the components of a concept.

Advance Organizer Model can be used to teach:

- Any concept that has a big picture.
- In mathematics, only concepts are not important, procedures are also important. Students need to learn procedures and logic. If students have got the concept but they are unable to follow a certain procedure. Now here, advance organizer model cannot be used such successfully. Task analysis model is a very good model to teach mathematics.
- A teacher must know what are the concepts where advance organizer model can be used and where it can't.
- Advance organizer and Concept analysis model are very good models to teach different themes in science, social studies, Islamiyat and even in languages.

Do remember that no method is always useful. Every model has its contextual importance.

Methodology as an Instructional Process”

Outlines

1. Multi Methodology
2. Right vs. Left
3. Implications for teaching.
4. Creativity and Right- hemisphere Objectives
5. Learning Styles
6. Harvard Gardner’s Multiple Intelligence

Being teachers we must know how human mind perceive the classroom knowledge? How does human mind work? And where the information store in the brain. We will talk about the importance and use of multi methodology. Our mind works in a peculiar way, it has right and left hemispheres. Childs mind is on developmental phase till the age of 8. By the age of 8 these sides are well developed.

Multi Methodology

Different types of mental functions occur in the left and right hemisphere. Our brain is composed of right and left hemisphere. And these are responsible for different kinds of functions. Below are some functions carried out by right and left hemisphere.

Right vs. Left

Right	Left
1.Visual	1.Verbal
2.Nonverbal	2.Logical
3.Spatial	3.Categorical
4.divergent thinking	4.Convergent thinking
5.Intuition	5.Detail

Divergent thinking is more creative. Divergent thinking is outside the box thinking. For creativity divergent thinking is very important. We do not think in fixed manner. We can ask some strange questions. Right hemisphere is responsible for this type of thinking.

Convergent thinking is more focused. For example we have a lot of different facts and ideas and we carried out some results of them or logically converge them. Evaluative, analytical and logical thinking includes in it. This type of thinking is done by left hemisphere.

Guessing is basically intuition. Some people have intuitive feeling. Their right brain is prominent in this function.

When we see someone we recognize him by face this is the function of right brain. But to associate the name with face is the responsibility of left part of brain. Some people can remember both name and face it means that their both sides are working equally. Those who remember the faces it means that their visual and spatial part is strong and verbal part is weak.

Implications for teaching.

Teachers should plan instruction to enhance both hemispheres.

Teachers persistently emphasize objectives and instruction that focus on the left side of brain. We always talk about creative thing and synthesis in higher level of Bloom's taxonomy. What happens in actual classroom?

A research was conducted and it was reported that teachers mostly focus on left hemisphere of children. In left hemisphere there is logical thinking, verbal intelligence, details and convergent thinking. As a result of such instruction left brain function dominates. There is imbalance between right and left brain. For teachers it is important to construct their instruction in such a way that is suitable of the development of right as well as left brain. When we talk about right side there is the function of creativity and divergent. The problem for the teacher is to construct such objectives that can be measurable. There is a difficulty to measure the creativity. Performance objectives are those objectives that are measurable. A teacher must work hard to create these kind of objectives.

Creativity and Right- hemisphere Objectives

Create a story by using a story starter, in which all the physical elements of the story starter are incorporated into the plot.

This is the function of divergent thinking. Objective must be in the form that it can be measured. If we will ask the question Create a story of your own choice? It will not be the performance objective. It is vague it can not be measured. Maybe a child writes a brief story or someone else writes a skillful story. So our objective should measure the creativity of all kinds of children. But we must give the space to the children for their divergent thinking.

Using only three primary colors, create a painting that includes all the elements of the modern style.

Create a brochure to signify cell travel.

A teacher must create such objectives that help the students to develop both their right and left side of brain. And even in their practical life after school they will be able to use both sides of their brain.

Learning is not appropriate, if both sides of brain are not working appropriately.

Multimethodology

Multi means many and methodology means collection of different methods.

It provides instructionally rich classroom by making use of a variety of teaching methods and techniques like:

- 1. Project learning**
- 2. Inquiry/student research**
- 3. Lecture**
- 4. Demonstrations**
- 5. Videos**

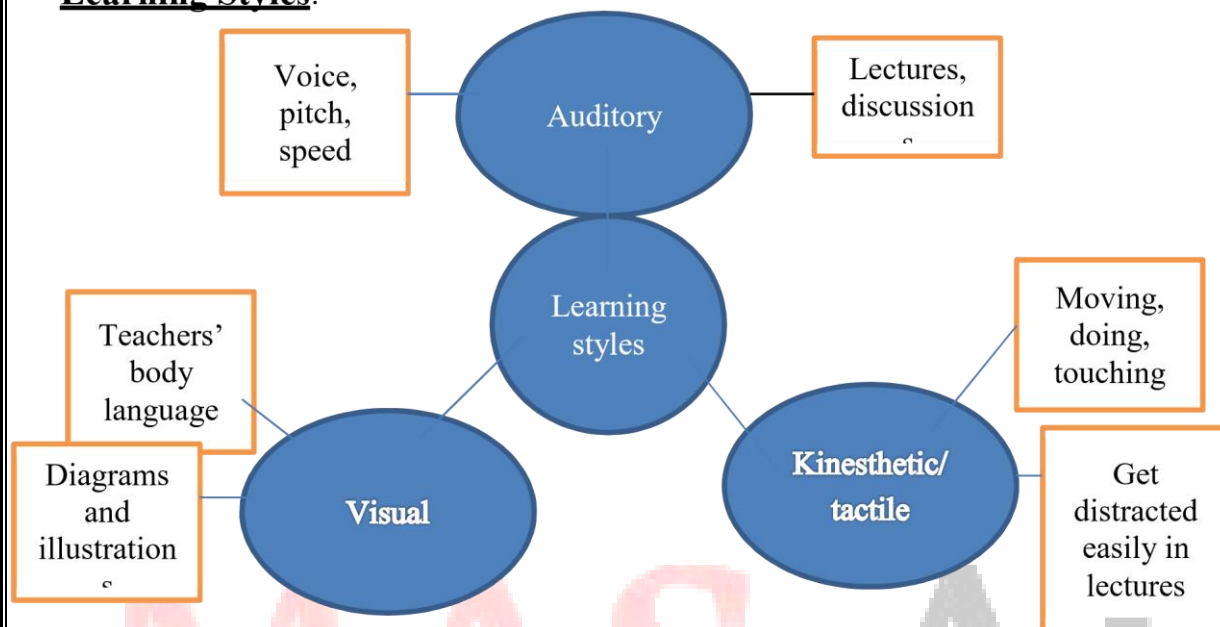
When we plan a unit we must have arranged different methods in our planning.

We can use techniques or different tools in classroom they will make up for multi methodology.

Maybe we start our lecture with brainstorming we will wind it up. Then we will give them 5 minutes lecture or we will demonstrate something to them. Maybe we will show them a video of 2-3 minutes. There are multiple intelligences in children. Attention time of small children is 10 minutes. For older ones it may be of 15 minutes. If we have a 40 minutes lecture time and we are only lecturing to the student and their attention time is not more than 15 minutes. They will distract after sometime. Variation is the quality of a good lesson. There must be some techniques after short intervals that may address to various learning styles. We may use different strategies in 30 seconds also. How it can happen. Its example is that we can show a 30 second visual clip to the students and we may ask them to see it for 30 seconds and identify the things in this clip. This is also a strategy. To be a good teacher it is necessary to use different strategies.

Because it has a lot of benefits. And students also enjoy this type of learning.

Learning Styles:



There are three learning styles

1. **Auditory**
2. **Visual**
3. **Tactile**

Auditory is related to hearing. Children with auditory learning style enjoy lectures and discussions. They enjoy listening. Voice pitch matters a lot for these children they do not understand only visual tools. In every class we have auditory, visual and tactile learners. Teacher will use its voice as a tool for the auditory learners. Fast speed of the voice of teacher will be disturbing for this type of learners.

Demonstration method is a very good method for visual learners. It is said that good lecturers are those who use audio visual aids with their lecturing. A lecture could be useful with the visual learners only if they are accompanied with audio visual aids. Diagram illustration is also very important for this type of children. Teacher's facial expression also matters for these children. Teacher's body language does matter for these children.

Tactile learners are those who can learn by touching. Kinesthetic learners are those who are most disadvantage learners in the classrooms. Doing is very important for these children. Teacher must give the opportunity to the learners for experiment. We have students who have different learning styles. Some children do not have predominant learning style they change themselves according to the situations. Some learners have distinct learning styles. Being teachers we have to be sensitive according to the needs of children. Multi methodology will be helpful for all kinds of learners.

Harvard Gardner's Multiple Intelligence

Intelligence is the ability to do a lot of mental work. Harvard Gardner challenges this thing that ability is not of same kind. There are 8 different kinds of intelligence.

EDU301 Midterm Preparation Short Notes and Quizzes BY PIN2 and MUHAMMAD (MAS All Rounder)

It is said that you get job because of your IQ and you sustain job because of your EQ (emotional IQ).

Harvard Gardner's multiple intelligences.

S#	Intelligence	Description
1.	Visual/Spatial	Ability to perceive the visual (puzzle building, charts, graphs, painting etc.)
2.	Verbal/Linguistics	Ability to use words, Good auditory skills. Generally elegant speakers.
3.	Logical/Mathematical	Ability to use logic, reason, classification, problem solving
4.	Bodily Kinesthetic	Ability to control body movements and handle objects carefully. Sports, dancers, artisans.
5.	Musical/Rhythmic	Ability to produce and appreciate music. Remembering melodies, singing, whistling.
6.	Interpersonal	Ability to relate and understand others(it uses verbal and nonverbal language)
7.	Intrapersonal	Ability to self-reflect and being aware of one's inner state. It is about recognizing own strengths and weaknesses, evaluating own thinking patterns.
8.	Naturalist	The ability to explore nature

Some students are very good in interpreting the graphs. This is because of higher spatial intelligence of the children. In childhood teachers have to work on all 8 types of intelligences. Children with verbal ability are the elegant speakers. They know how to use the words. They know how to speak.

Third type of children is very good in problem solving. They can reason. Their convergent thinking is very good. They talk with logical sequence. They can classify the things.

Children in forth category are good sports persons. Dancers includes in this category. Control on the body movements is the part of this intelligence.

Children who appreciate music have musical intelligence. They can recognize the melodies.

Some people can relate or communicate with the people easily. We feel happy to interact people with smile. We can provide information in two ways happily or coldly. This is the interpersonal skill. Communicate with out expression is another thing. Verbal communication is important but nonverbal communication is also very important. Being teachers we need to develop the interpersonal intelligence of our students. Because we are social beings we do not live in isolation. We must know how to relate with other people.

Sometimes we do not know about our strengths and weaknesses. Intrapersonal skills mean knowing our own selves. And accordingly we make our future. Philosophers have a lot of intrapersonal intelligence. It is time consuming to develop intrapersonal intelligence.

Some people are very much concerned about nature and their surroundings. They love to be with nature. They try to explore nature. Being teachers it is our duty to improve different intelligences of all the students.

What is important model for curriculum planning?

Task analysis model is a very important model

What is the important thing that we use in Tyrol's model and in Bloom's Taxonomy? That you observe the ultimate behaviors

What is the application level in cognitive domain? Explain with examples:

Classify the following materials in transparent, translucent and opaque objects.

Classify the given foods into vegetables, fruits and meat group

Use the formula. $\text{Breadth} \times \text{Length} = \text{Area}$

Use the knowledge in a new situation is application level. Example: Give five things to the students to identify these three kinds of objects. These are: Cellophane sheet, paper, table, book, and wall. Now, if the students are able to identify that what are opaque, transparent and translucent objects then they are acquiring application level

What are the instructional aims for lesson planning?

Student-oriented (Instructional aims are broad)

Which methods are used for effective teaching regarding with sequencing?

Teacher needs to start lesson with simple steps,

Use concrete examples,

Add complexity to the lesson,

Introduce abstractions. (Heart beat and B.P)

Presentation

Presentation is a teaching method where a teacher presents concepts and procedures.

Jean Piaget date of birth

9 august, 1896

Reflective practice

Answering some key questions to create an image of the classroom teaching and learning

Zone of proximal development

The gap between actual and potential level of a child is Zone of Proximal Development.

What is short term planning?

Lesson planning is a short term planning.

Lesson plan, what is lesson planning?

Lesson is a piece of a unit NOT a block of time

“A lesson plan defines objective, plans materials, resources and activities are mobilized for the efficient attainment of the selected objectives; and finally, evaluation criteria is also identified.”

What is multi methodology? 2

Different types of mental functions occur in the left and right hemisphere. Our brain is composed of right and left hemisphere.

Bloom taxonomy

There are 6 levels of Bloom's taxonomy of cognitive domain. Knowledge, comprehension, application, analysis, synthesis and evaluation

Elaboration method

Metaphors and analogies

Drawings

Q: which competency is important for teacher in learning?

Content knowledge

Teaching is a process not object 3 mrks

Teaching is the process to use different objects and ideas

Requirements of lesson plan?

Subject, Instructional objectives, Rationale, Content and process, Instructional procedures

Three characteristics of performance objectives

1. Performance 2. Condition 3. Criterion measure

Condition

Condition is a description of the conditions under which learner's performance is to occur.

Modeling processes:

These are attention, retention, production and motivation.

Why activities are important?

Activities are important because we do not teach processes to our students unless we do not include learning activities in our lessons.

Why school is important for social development?

In social development very important things are sharing (like making friends), observes rules arrangements and physical developments, so for these all school plays important role.

Quality of a Good teacher

A good teacher is the, one who plans a lesson, implement it and evaluate it after implementation. A good teacher is the one who engages the students in active learning, a good teacher must know Assessment and Evaluation, Teaching techniques and skills, Pedagogical content knowledge,

Kinesthetic learning

Kinesthetic learning is that in which the student carrying out a physical activity, rather than listening to a lecture or watching a demonstration.

Benefits of unit plan

Unit planning is important because we need to know the reasons for dividing the whole thing into components. Most of the time teachers complaint for shortage of time. This problem can be solved by making the detailed unit plans. You can observe all the topics given in the yearly plan, and then identify the most important topics and the overlapping topics. You can omit the overlapping topics whose level of difficulty is the same as taught previously. So, actually unit planning helps you to go through whole yearly plans

What are the instructional aims for lesson planning?

Instructional aims: Student-oriented pg 123 Lec 17

Sequencing

The art of developing logical plan for instructional activities is called 'sequencing'

What is important model for curriculum planning?

Lesson planning

Approaches for Problem Based Learning

- Modeling
- Guiding
- Fade out

Q: Reflection in and on actions

Reflection *in* action

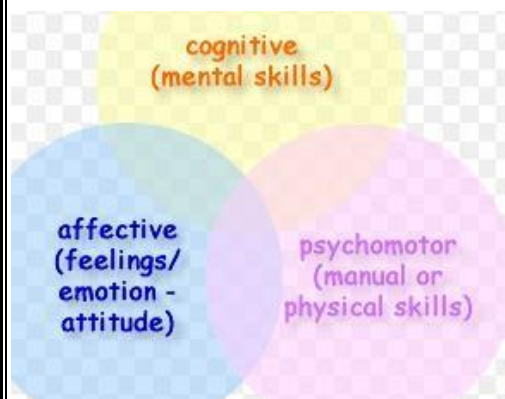
Thinking about what you are doing whilst you are doing it

Reflection *on* action

Thinking about what you did after the event

What is CAP? Explain them. / Bloom's taxonomy Domain

CAP: Cognitive, Affective and Psychomotor. / Cognitive (Knowledge), affective (Attitude) and psychomotor (Skills)



Q: Deductive vs Inductive

(General to Specific) (Specific to general)

Deductive vs. Inductive



Q: instructional vs curriculum development

Instructional vs Curriculum Planning:

Instructional planning	Curriculum Planning
Identifying pupil's needs	Identifying societal needs
Writing and sequencing objectives	Writing standards and benchmarks in sequence
Selecting methods/ strategies	Benchmarks in sequence
Assessment procedures	Assessment
Resources	Resources

Q: unit plan vs lesson plan

Unit plan	Lesson plan
Subject	Subject
Unit topic	
Lesson topic	Unit topic
Rationale of the topic	Instructional objectives
Instructional objectives	Rationale
Content and processes	Content and processes
Learning activities	Instructional procedures
(Parallel resources)	1. Focusing event 2. Teaching procedures 3. Student activities and participation 4. Formative check

Kinds of projects:

- Exploratory Projects
- Research Projects
- Product focused Projects

What is the application level in cognitive domain? Explain with examples:

Use the knowledge in a new situation is application level. Now you give five things to the students to identify these three kinds of objects. These are: Cellophane sheet, paper, table, book, and wall.

Now, if the students are able to identify that what are opaque, transparent and translucent objects then they are acquiring application level.

History of Reflective practice

Reflective practice is a concept used in education studies and pedagogy. Reflective practice is a continuous process and involves the learner considering critical incidents in his or her life's experiences. Philosophers, theorists, educators and researchers have contributed to the development and growth of Reflective Practice. John Dewey (Dewey, 1933) is recognized as the eminent 20th century influence on reflection in education.

QUIZ

Who presented the multiple intelligence theory? **Harvard Gardner**

How many levels ? **3** Bloom's taxonomy

Graphic organization What is concept

Sentence formation map?

Teacher is a prerequisite for paragraph.

identifies classroom assessment criteria.

Art of developing logical plan for instructional activities is called? **"Sequencing"**

Methods are also identified in... ? **"Instructional planning"**

Good Textbooks provide sequence? **"Structured sequence of lessons"**

Knowledge has forms? **"Two"**

Knowledge is something that is learnt by reflecting, acting on something is called? **"Subjective"**

A child knows about own cognition is called? "Metacognitive knowledge"

Memorized things in? "Facts"

Task analysis model is a very important model as it helps the teacher to identify prerequisites.

The process of setting goals, developing strategies is planning.

We discuss criteria and method in evaluation.

The individualized part of IEP means that the plan has to be tailored specifically to your child's special needs.

A unit plan is a hierarchy of lesson plans.

Methods are also identified in instructional planning Student-oriented.

IEP is basically an extended adaptation of a lesson plan.

Different types of mental functions occur in the left and right hemisphere The network methodology is totally student-centered.

Asking question is a skill.

Brain development continues till the age of 8.

We can remember those things which are connected with our prior learning.

Pedagogy means how to teach students.

Adolescence is a time of profound brain growth.

Integration means putting things together.

Advance organizer model is based upon deductive learning.

Case method is a very good approach to know problem solving.

The networked methodology of integration is. Student centered (Lec 27)

We can remember those things which are concerned with ours. Right side memory (Lec 22) Pedagogy means how to teach. Children

EDU301:Quiz No 2

Question # 2 of 10 (Start time: 09:49:17 PM, 06 December 2016)

There are different ----- to do different things.

Select correct option

☐	methods
☒	mechanics
☐	process
☐	views

EDU301:Quiz No 2

Question # 3 of 10 (Start time: 09:50:14 PM, 06 December 2016)

----- is the title of the whole unit.

Select correct option

☒	Unit/ subject
☐	Rationale
☐	Content
☐	Process

EDU301:Quiz No 2

Question # 4 of 10 (Start time: 09:51:01 PM, 06 December 2016)

----- comes from curriculum planning.

Select correct option

☒	Holistic vision
☐	Detailed implementation
☐	Term plan
☐	Unit plan

EDU301:Quiz No 2

Question # 5 of 10 (Start time: 09:51:36 PM, 06 December 2016)

There are ----- foundations of curriculum.

Select correct option

☐	Two
☒	Three
☐	Four
☐	Five

EDU301:Quiz No 2

Question # 6 of 10 (Start time: 09:52:46 PM, 06 December 2016)

----- is the level of understanding.

Select correct option

☐	application
☒	Comprehension
☐	Evaluation
☐	Analysis

Quiz Start Time:

Question # 7 of 10 (Start time: 09:53:29 PM, 06 December 2016)

The ----- domain encompasses objectives that deal with the recall or recognition of knowledge.

Select correct option

☐	Psychomotor
☒	cognitive
☐	affective
☐	educational

EDU301:Quiz No 2

Quiz Start Time: 09:47 PM,

Question # 8 of 10 (Start time: 09:55:07 PM, 06 December 2016)

In -----, it includes link between standards, benchmarks, learning outcomes and instructional objectives.

Select correct option

☐	horizontal level
☐	primary level
☒	vertical level
☐	vertical level

EDU301:Quiz No 2

Question # 10 of 10 (Start time: 09:57:39 PM, 06 December 2016)

Hierarchy of Affective domain was developed by Bloom and Krathwohl in -----.

Select correct option

☐	1980
☐	1975
☒	1964
☐	1958

EDU301:Quiz No 2

Question # 9 of 10 (Start time: 09:56:09 PM, 06 December 2016)

The first three levels of cognitive domain are called as -----.

Select correct option

☒	Lower level of learning
☐	Higher level of learning
☐	Moderate level of learning
☐	All of the above

EDU301:Quiz No 2

Quiz

Question # 1 of 10 (Start time: 09:47:46 PM, 06 December 2016)

The last three levels of Bloom's taxonomy of cognitive domain are called as -----.

Select correct option

☐	lower level of learning
☒	higher level of learning
☐	moderate level of learning
☐	initial level of learning

1. social constructivism is present by _____ Lev Vygotsky 2. The domain encompasses objectives that deal with recall or recognition of knowledge.

- _____ **cognitive**
3. Which of the following is not metaphor for teacher? _____ **teacher is a guider**
4.is not appropriate, if both sides of brain are not working appropriately. _____ **Learning**
5. Learning is there when teachers try to help learners change their -----instead of focusing on their own teaching.
_____ **cognitive structures**
6. - is to teach certain content to the students. _____ **METHOD**
7. Teachers' complaint for shortage of time can be resolved through ----- . _____ **Unit planning**
8.are much economical and take less space in our working memory _____ **Images**
9. ----- is a short term planning. _____ **Lesson plan**
10. Holistic development means _____ **Complete development**
11. In this state of functioning, a teacher does not invite people to give you suggestions. There is no sharing of ideas _____ **Intentionally Disinviting**
12. A person with ----- need not have specialized knowledge of his trade. _____ **occupation**
13. How many key context are there in schooling? _____ **3**
14. Teaching is an activity to ___ knowledge. _____ **Impart**
15. teachers want _____ **career growth**
16. complete formula for teacher growth . **Knowledge ++ Reflection = Growth**
_____ **Experience**
17. Schools follow a certain ----- . _____ **curriculum** 18. _____ means that students may get any change in their behavior. _ **behavioral perspective**
19. "Society for Pakistani English Language Teachers" organize different workshops for ---- .
_____ **teachers**
20. ----- education has no regular curriculum. _____ **Informal**
21. Reflective Practice was introduced by ----- . _____ **Jean piaget**
22. Teaching has a ----- function. _____ **social**
23. What is the highest level of teaching development ? _____ **Intentionally Inviting**
24. Pedagogy is a study of _____ **teaching methods**
25.can lead development _____ **Learning**
26. Learning can lead ----- . _____ **development**
27. Vygotsky's theory about prior learning and social context included ___ major ideas. _____ **4**
28. Who believe that knowledge is actively constructed by learners? _____ **Nolan and francis**
29. ----- is not restricted to the schools. _____ **Collegial context**

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30. Knowledge about different facts is ----. **stratified knowledge**
31. The warmth, respect and appreciation in the eyes of the ----- for the teacher are the actual recognition. **students**
32. ____ is an ability to recall or recognize what has been learned or experienced
Retention
33. In this state of functioning teacher realize that you didn't know everything and they need development. help and advice from your colleagues **Intentionally inviting**
34. Paulo freire was born in **Brazil**
35. Teaching is a way of development certain ____ behaviors among students. **desirable**
36. ____ is an organized body of knowledge. **Science**
37. Teacher must give ____ for every students. **feedback**
38. Schooling is not about a single person, it is a ----. **Group orientation**
39. stratified knowledge is the Knowledge about **facts**
40. Knowledge is something that is learnt by reflecting, acting on something is called? **"Subjective knowledge"**
41. Educators work to stimute _____. **Spirit of inquiry**
42. To ----- is to change. **Learn**
43. Teacher must give ____ given from the teachers maximizes students learning.
Constructive feedback
44. performance objectives are also known as objectives **behavioral**
45. A is worth a thousand words **picture**
46. Teacher has the autonomy of how to teach in a **class**
47. A ----- needs extensive training and specialized knowledge. **profession**
48. The level of to the profession must be to the range of every student **commitment**
49. Teacher must share ideas with the students so that they can work for a change in --- **society**
50. ----- is created when we act and reflect. **knowledge** 51. Teacher is more interested in.....instead of conceptual change **covering the syllabus**
52. Reflection is of ----- types. **2**
53. At second stage of zone of proximal development, a child gets assistance from ----- **self**
54. The reflection on every action at the same moment when the action is being taken is -----
reflection in action
55. A ----- education comprises of a basic education that a person receives at school. **formal**

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56. Different cultures have different perceptions about ----- **education**
57. Precise statements written in the lesson plans about expectations from students are called **Performance objectives**
58. If teacher play role like a gardener, and use the teaching strategies as a fertilizer than students grows like a: **Seed**
59. Where there is silence, there is no ----- **learning**
60. At ----- stage of zone of proximal development, a child gets assistance from more knowledgeable other. _____
61. A teacher make education attractive for students by using teacher learning strategies _____
62. One will have more chance of being successful as a teacher if _____
63. Which of the following competency should be the most focused by Good teachers? _____
64. Which of the following is responsible for curriculum planning? _____
65. Curriculum guides actually give us a guideline about what to be taught in different ----
_____ **grade levels**
1. Demonstration method is a very good method forlearners _____ **visual**
2. Knowledge may be simply divided intoforms _____ **two**
3. Nolan and Francis (1992) says Knowledge is actively by learners _____ **constructed**
4. Which of the following is based on Gagne's model. _____ **Hunter's model**
5. it means that whatever you teach the students, the students get it well _____ **Literal level**
6. When teacher provide feedback, the studentstheir learning in mind _____ **reinforce**
7.are those which are prerequisite actually _____ **Independent enabling skills**
8. Holistic vision and detailed implementation are two main important component of which type of planning _____ **instructional**
9. Initial level of Psychomotor domain is _____ **Perception**
10. Gagne's plan include a sequence ofparticular "Instructional events". _____ **nine**
11. Which of the following is a commonly used teaching strategy which helps in developing space in working memory
_____ **elaboration**
12. Students' tests indicate their _____ **learning.**
13. When teacher provides guidance to the students, this process is called _ **semantic encoding.**
14. an inferential statement that expresses a relationship between two or more concepts. _
_____ **Generalization**
15. is a learning disorder that is characterized by a disturbances in rate of educational

- development_____ **Autism**
16. which domain is concerned with physical and motor domain_____ **Psychomotor**
17.is basically intuition_____ **Guessing**
18. means that the disposition or learning you are talking about, you must value that disposition. _____ **valuing**
19. policy is to cover the content. _____ **school** 20. Schools not only teach the students but alsothem. (Sausa,2003) _____ **raise**
21. Educators work to stimulate the _____ **spirit of inquiry**
22.is actually detailed form of unit plan. _____ **Lesson plan**
23. The objects through which light could not pass are ----- objects. _____ **opaque** 24.helps to make learning more manageable. _____ **Sequence**
25. _____ means that students may get any change in their behavior. _____ **behavioral perspective**
26. The ----- focuses on what the learner will experience, rather than what the instructor will share or do. _____ **objective**
27. The statement "Write an appropriate title for the text" comes in the ----- level of cognitive domain. _____ **synthesis**
28. Every educational activity should have a ----- . _____ **goal**
29.is the guarantee of effective instruction and effective learning _____ **unit planning**
30. _____ is an organized body of knowledge. _____ **Science** 31. Much human behavior is learnt by observing the behavior of others _____ **Bandura**
32. There are ----- types of education in our society. _____ **two**
33. Every student has different ----- of learning. _____ **Potential**
34. is a condition of partial or total impairment of sight or vision that even with correction affects educational performance adversely. _____ **Blind and Low Vision**
35. A ----- education comprises of a basic education that a person receives at school. _____ **formal**
36. There are ----- modeling processes. _____ **Four**
37. The statement " Summarize the story including its main idea" comes in ----- level of cognitive domain. _____ **Synthesis**
38. cannot be separated from the social context in which it occurs. _____ **Learning**
39. are skill oriented things where our motor muscles are

involved. _____ **Psychomotor domain**

40. Mechanism indicates that a child is -- to do a task by following its mechanics ____ **independent**

41. ----- is a readiness for action. _____ **Set**

42. At ----- stage of zone of proximal development, a child gets assistance from more knowledgeable other. _____ **second**

43. Research shows that teachers mostly focus on ----- hemisphere. _____ **left**

44. A teacher is responsible in the ----- development of a child. _____ **cognitive**

45. ----- thinking is outside the box thinking. _____ **Divergent**

46. ----- is also a conceptual change. _____ **Teacher growth**

47. In ----- education, no formal certification is given at the end. _____ **non-formal**

48. Dyslexia does not affect the ----- of a person. _____ **intelligence**

49. ----- activities are different from teaching activities. _____ **Learning**

50. The ----- domain encompasses objectives that deal with the recall or recognition of knowledge. _____ **cognitive**

51. ----- perform poor in mathematics and science. _____ **Girls**

52. Teaching is a ----- profession _____ **profession**

53. Which type of diversity is related to Parental education, occupation and social status in the community? _____ **Socio economic**

54. Girls are less committed to ----. _____ **careers**

55. Learning that changes an existing conception is called ---- _____ **conceptual change**

56. The fast and foremost is consideration of a teacher being an/a of change. _____ **Agent**

57. Which is the broader term? _____ **curriculum**

58. Altering motor activities to meet demands of problematic situation is - _____ **Adaptation**

59. Objectives that represent the purposes of instruction of a teacher are called: _____ **Instructional Objective**

60. Different cultures have different perceptions about ----- education _____ **education**

61. Affective domain was developed by Bloom and Krathwohl in ----- 1964

62. Schools follow a certain ----- curriculum _____ **curriculum**

63. Lev Vygotsky's was born in ----- Russia

64. ----- is the name of degree that a person must get to join teaching profession. _____ **B.ED/M.ED**

65. You will organize the ----- in such a way that you will ask them to first observe and then record. _____ **assessment**

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66. The objective "The student will judge the effectiveness of writing objectives using Bloom's taxonomy" is an example of ----- level of cognitive domain. **Analysis**
67. Good curriculum planning has two major components holistic vision and **Detailed implementation**
68. ----- is not restricted to the schools. **Collegial context**
69. IEP is the abbreviation of ----- **Individual Education Plan**
70. ----- is the domain where our body movements are involved. **Psychomotor**
71. Teaching has a ----- function. **social**
72. The term ----- is used while explaining multiple diversity among people. **dyslexia**
73. ----- is the title of the whole unit. **Unit/ subject**
74. The best teachers apply planning ----- **flexibly**
75. ----- plays an important role in child's learning. **Language**
76. Vygotsky's theory of social constructivism includes ----- major ideas. **Three**
77. Methods are also identified in ----- **instructional planning**
78. What we do in schools, we never focus on the ----- level of learning. **higher**
79. To write performance objectives is ----- **necessary**
80. The process of sequencing of concept should be from: **Simple to complex**
81. In this state of functioning, a teacher does not invite people to give you suggestions. There is no sharing of ideas. **Intentionally Disinviting**
82. The action verbs that used for evaluation level questions are: **Judge, verify, conclude**
83. ----- is basically an extended adaptation of a lesson plan. **IEP**
84. The interesting thing is that our emphasis is on ----- **working memory**
85. It is important for the broader curriculum to identify educational ----- **experiences**
86. ----- is a fixed capacity. **Intelligence**
87. Master teachers are ----- in their planning. **well-organize**
88. You have to create a check list for assessing ----- skills. **communication**
89. ----- is not appropriate, if both sides of brain are not working appropriately. **Learning**
90. You must tell the students about the ----- processes they are learning. **thought**
91. ----- is one of the famous models of curriculum development. **Tyler's model**
92. Teacher must come up with at least ----- so that the students can understand the concept easily. **one example**
93. Vygotsky was a ----- psychologist. **Russian**
94. ----- is an ability to recall or recognize what has been learned or experienced. **Retention**

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95. The warmth, respect and appreciation in the eyes of the ----- for the teacher are the actual recognition. _____ **students**
96. in -----, Bloom developed the taxonomy of cognitive domain. _____ **1956**
97. Individual educational plans are usually opposite to which of the following? _____ **Inclusion**
98. Detailed implementation comes from ----- planning. _____ **lesson**
99. The ----- of our colleagues is the foundation of power. _____ **esteem**
100. "Write an appropriate title for the text" is an example of ----- level of cognitive domain. _____ **Synthesis**
101. The concept of "Teaching is an Art", was developed byin 1891. _____ **William James**
102. At second stage of zone of proximal development, a child gets assistance from -----
_____. **more knowledgeable other**
103. Which of the following is the art of developing logical plan for instructional activities and has integrated steps? _____ **Sequencing**
104. Learning is a ----- process. _____ **social**
105. Age is the element of ----- diversity. _____ **physical**
106. ----- is change in behavior. _____ **Learning**
107. ----- is a teaching method where a teacher presents concepts and procedures. _____ **Presentation**
108. Teacher should remain relaxed while doing -----, _____ **brainstorming**
109. Paulo Friere was born in -----, _____ **1921**
110. Children construct their own -----, _____ **knowledge**
111. First level of Affective Domain is -----, _____ **Receiving**
112. Post lesson activities are related to -----, _____ **evaluation**
113. Deductive and inductive are not only the modes of presentation but modes of ----- also. _____ **experiments**
114. It was ----- century in which perceptions about teaching, learning and education were developed. _____ **16th**
115. Curriculum guidelines are consists of -----, _____ **Learning outcomes**
116. ----- are those skills which are required to achieve a certain goal. _____ **Enabling skills**
117. Idea of "teaching is an art" was developed by-----, _____ **William James**
118. Sequencing steps are in progression, they start from simple to -----, _____ **Complex**
119. Ministry of education has planned curriculum document till grade level: _____ **12**
120. The individualized part of IEP means that the plan has to be tailored specifically to your child's -----, _____ **special needs**

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121. Immersion model was developed for ----- diversity. **Language**
122. Procedural knowledge is gained through ----- **direct instruction**
123. Learning is there when teachers try to help learners change their -----instead of focusing on their own teaching. **cognitive structures**
124. In ----- level of cognitive domain, students recall their knowledge. **Synthesis**
125. Hierarchy of Affective domain was developed by Bloom and Krathwohl in ----- **1964**
126. Who gave this statement" Less planning leads to less learning" **Walsh**
127. While writing performance objectives, we have to use an action word that exactly shows the ---
----- **Behavior**
128. In information processing theory working memory is also termed as which type of memory? **Short term**
129. Teachers have to identify the ----- to monitor the progress of the students. **methods**
130. ----- is also known as concept map. **Graphic organizer**
131. instructional objective arethan goal
132. Which of the following is the focus of the Individual Educational Plan (IEP)?
133. The knowledge that consists of facts, concepts and generalization is termed as
134. In art class a student paints a new and original painting. Which will be cognitive level of this outcome according to Bloom's taxonomy? -
135. Whenever there is evaluation, there must be -----.
136. A ----- is a figure of speech describing something with implied terms. - 137. The thinking process which requires focused attention as compared to others: -
66. Educators work to stimulate the spirit of **inquiry** and acquisition of knowledge.
67. **Facts or principles** that he has memorized by learning.
68. Every student has different **potential** of learning.
69. **Reflective practice** is a way of studying your own experiences to improve the way you work.
70. Zone of proximal concept was also established by **Vygotsky**.
71. This professional standard demands from us to create a climate that promotes **Professional judgment.** the
72. Teacher has the autonomy of how to teach in a **class**.
73. **Task analysis** model is a very important model of learning.
74. Idea of "Teaching is an Art", was developed by **William James in 1891**.
75. Knowledge about different facts is **stratified knowledge**.
76. Teaching has a very important **social function**.
77. Planning is important as there are three characteristics of **master teachers**.

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78. **Intentionally inviting:** This is the highest level of your teaching development.
79. Knowledge is created, when we **act and reflect.**
80. Modes of presentation are **two** i.e. Inductive and deductive.
81. Nothing is learnt unless it is in **long term memory.**
82. To achieve the learning outcomes of every unit, we have to construct **some instructional objectives.**
83. While **writing performance** objectives, we have to use an action word that exactly shows the behavior.
84. In **horizontal level**, planning includes selection of activities, resources, assessment and homework.
85. In **vertical level**, it includes link between standards, benchmarks, learning outcomes and instructional objectives
86. **Intellectual growth** cannot take place unless we do not provide opportunities to our students to think at high level.
87. There are **three** foundations of curriculum: sociological, philosophical and psychological.
88. **"Analysis level** questions are higher-order questions that require students to think critically and in depth.
89. The art of developing logical plan for instructional activities is called '**sequencing**'. Such a plan consists of interlink steps.
90. The **taxonomy** has been widely used in curriculum and test construction. From google
91. **Learn skill of observation** then actually inductive mode of presentation is better than deductive mode of presentation.
92. Sequence helps to make learning more **manageable.**
93. **Comprehension level** of cognitive "Describe two nation theory".
94. **Holistic vision** comes from curriculum planning while detailed implementation comes from lesson planning.
95. **In curriculum planning**, assessment is taken into consideration.
96. Asking question is **a skill.**
97. Questions of students are **more important than the questions** of teachers.
98. **Curriculum documents** are not available in all schools.
99. Individual Education Plans (**IEP**)
100. The common thing in Tyler's model and Bloom's taxonomy is that the teachers observe the **behaviors**
101. **Content knowledge** is a very important competency of a teacher.
102. **Processes** are also very important in teachers' considerations.
103. **Sequencing** has different principles; these principles are the introduction of simple concepts then concrete examples.
104. Writing Standards and benchmarks in a sequence in **Curriculum Planning.**

105. Action research is very effective research for teachers, **because it aims at improvement.**
106. **Origination** is the highest level of Simpson's hierarchy. 107. **Lesson plan** starts with the subject.
108. There are different **mechanics** to do different things.
109. **Good textbooks** provide a structured sequence of lessons.
110. Working memory is our **conscious memory.**
111. Sequencing steps are in **progression.** They start from simple and go to complex.
112. **Origination** is the level where a child can originate things on his own.
113. Write performance objectives is **necessary.**
114. In order to teach a sequenced lesson teacher need to **add complexity** to the lesson.
115. **Unit planning** is the most important as well as the most time-consuming level of planning for each teacher. gave the idea by **Waish**
116. **Sentence formation** is a prerequisite for paragraph writing.
117. We have limited time to teach in a **class.**
118. **Bloom's Taxonomy** was knowledge level or recall level, where actually students recall their knowledge.
119. You will organize the experience in such a way that you will ask them **to first observe** and then record.
120. Teacher must come up with at least one example so that the students can **understand the**
121. **Content forms are three:** Facts, Concepts Generalizations
122. A lot of information can be communicated through a **picture.**
123. **Lesson plan** is actually detailed form of unit plan.
124. **Abstract** thinking is very important
125. Curriculum guides are planned by **Ministry of education** in Pakistan. 126. **Questioning** has a lot of significance value.
127. An important thing in inductive mode of presentation is **Process.**
128. **Enabling skills** are those skills which are required to achieve a certain goal.
129. The individualized part of IEP means that the plan has to be tailored specifically to your child's **special needs.**
130. **Content and Processes** are also very important in teachers' considerations.
131. Whenever we are **sequencing**, we need to know what a prerequisite for a particular terminal objective is.
132. **The focus in IEP** will be on the needs of the learners rather on the content to be taught.
133. In **debriefing teacher** tells the students to reflect what they have learnt through this process.
134. Elements of planning **11.**
135. **Simulations** are done in the virtual environments and are computer based.
136. **Discovery learning** is a learner-centered method.

137. **Group processes** and the classroom goal, task, reward and participation structures are more directly under the teachers' control.
138. **Classroom structures** are the foundations that shape particular lessons and behaviors during those lessons. Three important structures include task, goal, and participation structure. 139. **Synthesis level** Summarize the story including its main idea.
140. There are **four** steps in Taylor's model of curriculum
141. Write an appropriate title for the text.. come from **Synthesis level**.
142. We need to sequence our **learning objectives**.
143. Adding on must not be **confusing**.
144. Instructional aims: **Student-oriented**.
145. If a teacher plans to take the students for field trips, then he needs to consider **school resources**.
146. **Abstractions** are something which is not tangible.
147. Lesson is a piece of a unit NOT a **block of time**.
148. **Learning activities** are those where students are actively involved.
149. **Effective individual education plans** (IEP) have key characteristics. They are Individualized and child centered.
150. **Girls** perform poor in mathematics and science.
151. Teacher is a **person** who is making lesson plan, unit plan and term plan.
152. A lesson plan is defined as "a **systematic design** for the development, implementation and evaluation of instruction".
153. . What we do in schools, we never focus on the **higher level** of learning.
154. The common think in Taylor and Bloom taxonomy is that to teacher the **behaviors**.
155. Methods are also identified in **instructional planning**.
156. **In evaluation**, we discuss that there are two things; criteria and method.
157. Where there is silence, there **is no learning**.
158. **Metacognition**: is cognitive about cognition.
159. You have to create a check list for assessing **communication skills**.
160. The other name for Learning by reflection is **Socratic Method**.
161. **Master teacher** communicate their instructional objectives effectively to the students.
162. Linear fashion focus **on goals**.
163. Nonlinear fashion focus on **process**.

164. **Negative reinforcement** occurs when something already present is removed (taken away) as a result of a person's behavior.
165. Gagne expands the steps of introducing and organizing experience to include a sequence of nine particular "Instructional events".
166. Teachers have to identify the **methods to monitor** the progress of the students.
167. Whenever we are **planning a unit**, we really need to select these learning activities very carefully. And we need to make a match between processes and learning activities.
168. The interesting thing is that our emphasis is **on working memory**.
169. Lesson plan is part of the **unit plan** while activity schedule is part of the block timetable.
170. **Performance objectives**, there are the three elements present i.e. performance condition and criterion.
171. **Performance objective** we need to align our performance objectives with the curriculum.
172. **Subject/ topic** Unit subject is the title of the whole unit.
173. **Unit planning** is important because we need to know the reasons for dividing the whole thing into components. Most of the times, teachers' complaint for shortage of time. 174. There are **three** levels of plans.
175. **Collegial context** is not restricted to the schools rather now it has become web based
176. There are **6 levels** of Bloom's taxonomy of cognitive domain.
177. **Feeling of efficacy** is very important for the teachers
178. It is our assumption that independent skills are prerequisites, so students know them already. 179. Less planning leads to less learning. (Walsh, 1992).
180. **Collegial context** is something that emphasizes that power and decision-making should be shared among some or all members of the organization (Bush, 2003).
181. **Keeping notes** is a very important type of post lesson activity because a teacher can have the record of his/her teaching.
182. Knowledge forms are **Content, Process**.
183. **Mechanism indicates** that a child is independent to do a task by following its mechanics.
184. **Unit planning** is very challenging and time consuming but the most important thing is that good unit planning is a guarantee to effective instruction and effective learning.
185. **Schools' policy** is to cover the content as much as possible.
186. Evaluate your teaching, come up with judgments but provide sufficient evidence to support your statement.
187. **Declarative knowledge**: This is the knowledge that is declared in books, research papers, and newspapers.
188. 124. According to research, the best **recognition** is got from students and not from the government or the school administrators.

- 189. Blind and Low Vision** – A condition of partial or total impairment of sight or vision that even with correction affects educational performance adversely.
- 190. Active learning:** Active learning is where human mind is actively involved in constructing meaning of the experience.
- 191. Freire** was a Brazilian educator and philosopher who was a leading ...
- 192. Freire was born on September 19, 1921** ... middle-class family in Recife, Pernambuco, ...
- 193.** Teacher is more interested in **covering the syllabus** instead of bringing conceptual change in the students.
- 194. Science** is an organized body of knowledge.
- 195.** Answering some key questions to create an image of the classroom teaching and learning.” **Reflective practice:**
- 196. Reflective practice** is very important for a teacher.
- 197. Nolan and Francis (1992) believe that:** Knowledge is actively constructed by learners.
- 198. Learning is there when teachers try to help learners change their cognitive structures instead of focusing on their own teaching.**
- 199.** “Much human behavior is learnt by observing the behavior of others” (**Bandura 1978**)
- 200. Zone of Proximal Development (ZPD)**
- 201.** The gap between actual and potential level of a child is **Zone of Proximal Development**
- 202. Cognitive perspective** is to develop students’ academic and thinking skills from a novice level to a more expert level.
- 203.** Speech is a powerful psychological tool that lays the foundation for basic structures of thinking later in one’s development.
- 204.** According to **Vygotsky’s theory**, language, learning and environment is a social context.
- 205.** Creativity is also a part of **metacognition**
- 206.** Learning depends on **prior learning**
- 207.** Schools not only teach the students but also raise them. (**Sausa,2003**) **208.** What students are taught in schools affects the ways they will thereafter see and treat others. (**Schlesinger, 1993**)
- 209. CAP:** Cognitive, Affective and Psychomotor
- 210. Psychomotor domain** is the domain where your body movements are involved. **211.** Perception means **attending to a stimulus.**
- 212.** Set is a readiness for **action.**
- 213. Word ‘complex’** shows that here the child can do many things independently.

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- 214.** 1Adaptation comes from the word '**Adapt**' which means to set yourself in the given situation. **215.** **Hierarchy of affective** domain was developed by Bloom and **Krathwohl in 1964.** **216.** In organization, you start showing that behavior but that is not a **consistent behavior.**
- 217.** "Taxonomies may be used to decide what to teach, how to teach and how to evaluate teaching." (**Marzano, Pickering, and Pollock 2001**)
- 218.** Research shows that learning do not take place if presented in isolated items (**Hohn,1995**) **219.** Taxonomies provide a **cognitive structure.**
- 220.** Who presented the multiple intelligence theory? _____ **Harvard Gardner**
- 221.** How many levels Bloom's taxonomy? _____ **6**
- 222.** What is concept map? _____ **Graphic organization**
- 223.**formation is a prerequisite for paragraph. _____ **Sentence**
- 224.**identifies classroom assessment criteria. _____ **Teacher**
- 225.** Art of developing logical plan for instructional activities is called? _____ **"Sequencing"**
- 226.** Methods are also identified in... ? _____ **"Instructional planning"** **227.** Good Textbooks provide sequence? _____ **"Structured sequence of lessons"**
- 228.** Knowledge has forms? _____ **"Two"**
- 229.** Knowledge is something that is learnt by reflecting, acting on something is called? _ **"Subjective"**
- 230.** A child knows about own cogitation is called? _____ **"Metacognitive knowledge"**
- 231.** 12. Memorized things in? _____ **"Facts"** **232.** Task analysis model is a very important model as it helps the teacher to identify __ **prerequisites.**
- 233.** The process of setting goals, developing strategies is _____ **planning.**
- 234.** We discuss criteria and method in _____ **evaluation.** **235.** The individualized part of IEP means that the plan has to be tailored specifically to your child's __ **special needs.**
- 236.** A unit plan is aof lesson plans. _____ **hierarchy**
- 237.** Methods are also identified in instructional planning _____ **Student-oriented.**
- 238.** is basically an extended adaptation of a lesson plan. _____ **IEP** **239.** We can remember those things which are connected with our _____ **prior learning.**

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- 240.** **Adolescence** is a time of profound brain growth.
- 241.** Advance organizer model is based upon **deductive learning**.
- 242.** Nonlinear fashion focus on **process**
- 243.** Brainstorming is a common tool to **describe** a thing
- 244.** The white hat in the De Bono's six thinking hats signifies **information known or needed**
- 245.** **Teacher** model skill in direct instruction
- 246.** **Network** integration is created among group of students
- 247.** Teacher role is minimized in **unguided** inquiry
- 248.** In United States, pre-school is named as **pre K**
- 249.** **Gatekeeper** equalizes participation
- 250.** Generative topics actually make **connections**
- 251.** **Divergent** thinking is outside the box thinking
- 252.** The learning of **core concepts** is lifetime
- 253.** Different countries have different age levels of **formal** education
- 254.** Children can come up with different ideas and teachings must **accept** all ideas
- 255.** **Children** construct their own knowledge
- 256.** Our teachers do not focus on **core concept**
- 257.** Objects must be in the form that it can be **measured**
- 258.** **British** preschool name Nursery School or simply "nursery"
- 259.** **United States** preschool name pre-school and pre K
- 260.** Child is a natural discoverer. **Bruner**
- 261.** By the **three**, a child has TWICE as many brain connections
- 262.** In order to start working, the cells need to **communicate** with each other
- 263.** A research was conducted and it was reported that teachers mostly focus **sphere** n.

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264. For creativity **divergent** thinking is very important.
265. Different types of -functions occurs in the left and right hemisphere **Mental**
266. The networked methodology of integration is **Student centered**
267. Asking question is a **Skill**
268. Brain development continues till the age of **8**
269. We can remember those things which are concerned with our **Right side memory**
270. Integration means putting things **Together**
271. Advance organizer model is based upon **Deductive learning**
272. **Case method is** a very good approach to know problem solving.
273. .Pedagogy means how to teach **Students/**
274. Core concepts are **declarative** knowledge
275. Development cannot be separated from the **social** context in which it occurs
276. Development of **gross motor** skills is very important in preschool or early childhood education 277. **Children** construct their own knowledge.
278. John dewy says that there is no such profession where **knowledge** is separable from doing or practice.
279. **Application** of core concepts in new level is important
280. In **left** hemisphere there is logical thinking. Verbal intelligence and convergent thinking
281. Teachers want to teach in **depth** but want to cover the syllabus too
282. **Curriculum** is a dead thing teacher's give life to it.
283. **Researchers** use the word discourse for discussion
284. Teachers must provide the students with opportunities to **discover** things
285. **Performance assessment** can be used to measure student's problem solving potential as well as group
286. Knowledge can be assessed through **written tests**
287. Usually we do not **question** our tradition and authority

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288. Wait time is **thinking** time
289. The last level of Maslow's hierarchy of need is **Self-actualization**
290. **Socratic** Method is the example of discussion method
291. **Edison** invented the bulb
292. Projects tend to be **multidimensional**
293. Different types of **mental** functions occur in the left and right hemisphere.
294. Pedagogy means how to teach **children**.
295. Advance organizer model is based upon **Deductive learning**.
296. **Case method** is a very good approach to know problem solving.
297. Andragogy means how _ learn. **Adults**
298. Beyer says that critical thinking has **two** important dimensions.
299. The inquiry learning cannot be **rushed**
300. **Learners** are responsible for planning. Conducting and evaluating their own effort
301. Process of **assimilation** leads to consideration of new options and points of view
302. **Assimilation** leads to consideration of new options and points of view
303. According to Kolb (1984), learning is a process of a combination of grasping **experience** and transforming it.
304. Curious observation is the start of the **inductive process**
305. **Students** love integrated curriculum
306. What type of goodwill message is most likely to use an RSVP? Condolence, **invitation**, appreciation, holiday greeting,
307. Generative topics actually make ___ schemes, **connections**, procedure or assessments
308. Schooling average age.... **4/ 3**
309. we are concerned by student.... achievement. **Team**
310. Understand is in.... Level. **First/ conceptual**

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311. focus discussion and disposition.

312. Scientific method.... research. **Roots/Psychology/authentic** **313. Theory** can be falsified.

314. Perception means attending to a stimulus

We have limited time to teach in a -----.	class
----- means problems with reading, writing, spelling, symbols and numbers, because the brain misinterprets what it sees (visual) and hears (auditory).	Dyslexia
To write performance objectives is -----.	necessary
Age is the element of ----- diversity.	physical
Teachers must communicate their ----- to the students.	Experiences
The term ----- is used while explaining multiple diversity among people.	dyslexia
The statement "The student will define the 6 levels of Bloom's taxonomy" is an example of ----- level of cognitive domain.	Knowledge
Who gave this statement: "Having a critical spirit is as important as thinking critically".	niam
In -----, planning includes selection of activities.	horizontal level
in -----, Bloom developed the taxonomy of cognitive domain.	1956
A teacher needs to know the ----- level of the students.	Motivational
Objectives have a ----- purpose.	Limited
----- is a readiness for action.	Set
----- are intent of teaching.	Objectives

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The prescription of a minimally acceptable level of a performance on the part of a learner is called -----.	Criterion measure
Taxonomies provide a ----- structure.	cognitive
While writing performance objectives, we focus on the -----	action words
In performance objectives, all the ----- elements must be present.	three
While writing performance objectives, we have to use an action word that exactly shows the -----.	performance
----- is the highest level of Simpson's hierarchy.	Origination
Curriculum documents are not available in all -----.	schools
----- is the guarantee of effective instruction and effective learning.	Unit planning
While -----, you have to see the curriculum framework.	yearly planning
The statement "Write an appropriate title for the text" comes in the ----- level of cognitive domain.	synthesis
Altering motor activities to meet demands of problematic situation is -----.	Adaptation
A content is consisted of -----.	Facts - Concepts - Generalizations
	ALL
The ----- focuses on what the learner will experience, rather than what the instructor will share or do.	objective
The term ----- is actually a teacher who has expertise on his subject and he ensures the quality learning of the students.	Master teacher

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The last three levels of Bloom's taxonomy of cognitive domain are called as ---- -----.	Higher level of learning
The statement of an observable behavior on the part of learner is -----.	performance
Methods are also identified in -----.	instructional planning
Every educational activity should have a -----.	goal
The objective "The student will compare and contrast the cognitive and affective domains." is an example of ----- level of cognitive domain.	Comprehension
The ----- has been widely used in curriculum and test construction.	taxonomy
You must tell the students about the ----- processes they are learning.	thought
The prescription of a minimally acceptable level of a performance on the part of a learner is called -----.	Criterion measure
----- is a disorder in language formation that may be associated with neurological, psychological, sensory or physical factors.	Speech impairment
Who gave this statement: "Schools not only teach the students but also raise them."	Sausa
Who gave this statement" Less planning leads to less learning"	Walsh

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"Unit planning is the most important as well as most time consuming level of planning for each teacher" who gave the above statement?	Walsh
Girls are less committed to ---	careers
----- knowledge is a very important competency of a teacher.	Content

_____ plays an important role in child's learning.	language
Information used as evidence or as part of a report or news article is called _____	fact
Students _____ indicate their learning.	tests
Children construct their own _____.	Knowledge
A teacher is responsible in the _____ development of a child.	cognitive
Lev vygotsky's was born in _____.	Rusia
Idea of "teaching is an art" was development by _____.	William james
Teacher can manage different _____ in school for ethical development of a child.	Activities
A profession has a body of _____.	techniques
The role of a teacher is a changed from a lecturer to _____.	An agent of transformation
Learning is a _____ process.	social
development/learning cannot be separated from _____ in which it occur.	Social context

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Learning is a ___ endeavor.	social
In ___ teachers do not have autonomy or the power of decision making.	pakistan
Who gave the theory of multiple intelligence.	Howard gardner
___ education has a structure systems of learning.	formal
A view or opinion that is incorrect because based on faulty thinking or understanding is a ___.	misconception
___ model is an important way of learning.	Observational learning
The role of a teacher is changed from a lecturer to ___.	An agent of transformation
A profession allows ___.	autonomy
Education that is not given in proper schools is ___.	Informal education
___ greatly influences learning.	Prior knowledge
Different cultures have different perception about ___.	education
___ knowledge is acquired, if a child gets cognition about cognition.	metacognitive
___ are something that is memorized.	Facts
Who gave this statement "knowledge is created when we act and reflect"?	friere
___ is the procedure to gain declarative knowledge.	lecturing
Lev vygotsky died at the age of ___.	37
The first process in modeling is ___.	Alternation
Howard Gardner is very famous because of his ___.	Multiple intelligence theory

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_____ is very important for a teacher.	Reflection in practice
_____ is important but it does require time.	Conceptual change
_____ context of school is "characterized by or having power and authority vested equally among colleagues."	collegial
Paulo freire was born in _____.	1921
	1891
The idea of "teaching is an art or science "was developed in ____ by william james.	
----- activities are different from teaching activities.	Learning activities
	Objectives:
---- is a series of small action steps which are needed to achieve desired goals.	
	Comprehension:
"Describe the two nation theory" comes in ----- level of cognitive domain.	

	Characterization
----- means that a behavior becomes part of your life.	
----- comes from curriculum planning.	Holistic vision
	opaque
The objects through which light could not past are ----- objects.	
A unit plan is a ----- of lesson plans.	Series
There are ----- steps in Taylor's model of curriculum.	four

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It is important for the broader curriculum to identify educational -----.	experiences
----- is the title of the whole unit.	Unit subject
There are ----- necessary elements of planning.	11
A teacher needs to know the ----- level of the students.	motivation level
There are ----- types of communication disability.	2
Master teachers are ----- in their planning.	well-organized
Curriculum is a ----- term.	Broad
----- is essentially a nested process with horizontal and vertical dimension.	Planning
Elements of physical diversity are -----.	3
----- is a planning of one year of a school.	Long term Planning
A teacher needs to know the ----- level of the students.	Motivational
Detailed implementation comes from ----- planning.	lesson planning
Students' ----- must be considered before planning.	feedback

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Terms in revised Bloom's taxonomy were changed from noun to -----.	adjectives
----- is the highest level of Simpson's hierarchy.	Origination:
Teachers must communicate their ----- to the students.	Ideas
The prescription of a minimally acceptable level of a performance on the part of a learner is called -----.	Criterion measure:
We have limited time to teach in a -----.	
There are ----- domains of learning.	three
Benchmarks and standards are written in a sequence in -----.	instructional
We have to identify the facts, concepts and generalizations while planning a ---- -----.	a unit
Bloom's taxonomy was revised by -----.	William
Teaching activities are there to teach ----- to the students.	content
----- identifies classroom assessment criteria.	teacher

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----- is the gurantee of effective instruction and effective learning.	d unit planning
There are different ----- to do different things.	mechanics
The objective "The student will judge the effectiveness of writing objectives using Bloom's taxonomy" is an example of ----- level of cognitive domain.	Analysis
----- planning is very challenging and time consuming.	unit planning
"Abstract thinking leads to reasoning with symbols" this refers to ----- stage of Piaget's cognitive development.	Formal operational
----- do not have attention span.	Children
If we will use the connections our efficiency of doing any task will -----.	increase
Questions in ----- also includes in essential questions.	induction
In order to start working, the cells need to ----- with each other.	communicate
Teacher must ensure ----- development of child.	holistic l
Brain develop very fast in the ----- year after birth.	first

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Learners can learn only ---- chunks of information at a time.	5-9
Remarkable changes occur in the brain during the ----- decade of life.	second
A teacher can teach higher order thinking skills through the ----- process.	
----- is a time of profound brain growth.	Adolescent
----- should be made clear to the students.	Core concepts
A ---- year old child has the vocabulary of 2000 words.	
The average weight gain of 6-12 years children in a year is -----.	5-7
Fragmentation is said to be the ----- level of integration.	primary
Core concepts are ---- knowledge.	declarative
Teaching is very exciting for ----- teachers without integration also.	young
In the context of preschool it includes ----- stages of Piaget's cognitive development.	2
Children can come up with different ideas and teachers must ----- all ideas.	accept

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----- have no obvious right answer.	essential Questions
John dewy says that there is no such profession where ----- is separable from doing or practise.	knowledge
Generative topics actually make -----.	connections.
Jumping is the example of -----.	Gross motor
The networked methodology of integration is -----.	student-centered
----- always identify their intent.	Teachers
Teachers want to teach in ---- but want to cover the syllabus too.	depth
Child's rights convention of 1989 has mentioned that "----- is basic right of every child."	Education
Form 1 is ----- integration.	
The green hat in the De Bono's six thinking hats symbolizes -----.	creativity
----- are those things that can be changed.	Variables
Group learning will be more efficient for developing the -----.	idea
Bruner's first stage is -----.	Enactive"

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'Collecting data' is the ----- step of Guided Inductive Inquiry.	
According to Kolb (1984), ----- is a process of a combination of grasping experience and transforming it.	), Learning
The word scientific was devised in the -----.	19
The black hat in the De Bono's six thinking hats symbolizes -----.	judgment
Usually we do not ----- our tradition and authority.	question
----- invented the bulb.	Edison
Bruner's second stage is -----.	"Iconic
The red hat in the De Bono's six thinking hats symbolizes -----.	feelings
Problem based learning starts from -----.	Analysis
----- characteristics of critical thinking are presented by Wade (1995).	
Inquiry is NOT about -----.	memorizing facts
During guided inductive inquiry, the ----- plays the key role in asking questions.	teacher p
Problem based learning also starts from -----.	Questions

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There are ----- processes of inquiry.	13
The term 'Six Thinking hats' was presented by -----	De Bono
The ----- is an educated guess about the relationship between the independent and dependent variables.	Hypothesis
Students will make generalizations that are too -----.	broad
The solutions, responses provided by learners are not found in -----.	textbooks
Children produce their original work after -----.	problem based learning
Inquiry may involve -----, procedure and solution.	Problem
----- are responsible for planning, conducting and evaluating their own efforts.	Learners
Scientific method can be used in ----- also.	social sciences
Roots of the ----- of all social sciences is based on scientific method.	research
In school we do not have much time to deliver information so we must know the -----.	
The most important part of integration is -----.	assessment

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----- thinking is a disciplined manner of thought that a person uses to assess the validity of something.	critical thinking
----- talked about logics and he was one of the pioneers.	Aristotle
----- of information is important.	depth
Inquiry is NOT a ----- technique.	Hypothetical
----- love integrated curriculum because it provides the context for learning.	Children
Group learning develops ideas and -----.	
Learners progress from specific observations to -----.	inferences
The brain thrives on -----.	connections
	teacher
During guided inductive inquiry, the ----- plays the key role in asking questions.	
Inductive inquiry is of ----- types.	2
According to Kolb (1984), Learning is a process of a combination of grasping ----- and transforming it.	Experience
Inquiry may involve problem, ----- and solution.	procedure

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In ----- , students investigate a teacher-presented question.	Guided inductive
Students must learn to modify their -----.	conclusions
----- is a permanent change in behaviour.	learning
----- are much important in scientific method.	variables
Paper pencil tests can assess the ----- of the students.	
Inquiry method requires the learner to develop ----- associated with inquiry.	various processes
----- inquiry is widely used in our classroom settings.	Information inquiry
Learners progress from ----- observations to inference or generalizations in GII.	specific observations
----- is the domain where our body movements are involved.	Psychomotor
----- is actively constructed by learners.	Knowledge
Idea of "teaching is an art" was developed by-----.	William James
is a learning style in which learning takes place by the student carrying out a physical activity.	Kinesthetic learnin

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growth cannot take place unless we do not provide opportunities to our students to think at high level.	Intellectual growth
The theory of Zone of proximal development was given by -----.	Vygotsky
A child is responding in the form of action but this action is not an independent action is a -- ----.	Guided Response
means the knowledge about how to teach the students.	pedagogical knowledge
There are ----- types of education in our society.	2
Learning is ----- by nature.	social
----- includes all intellectual skills.	Cognativbe domaon
According to research, the best recognition teachers got is from the -----.	students
There are ----- types of intellectual disability.	
Developing questioning skills among students comes in	Higher thinking levels:
means attending to a stimulus	Perception
Who gave this statement: "Knowledge is created when we act and reflect"?	Friere:

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----- is the level where a child can originate things on his own.	origination
“Write an appropriate title for the text” is an example of ----- level of cognitive domain.	Synthesis level
Teaching is a ----- profession.	noble
The objective “The student will construct an instructional objective for each level of Bloom's taxonomy” is an example of ----- level of cognitive domain.	
A teacher is a -----.	Change agent
is to teach certain content to the students	METHOD
cannot be separated from the social context in which it occur	Learning
It was ----- century in which perceptions about teaching, learning and education were developed.	16th century
education has a structured system of learning	formal
Knowledge is actively constructed by	learners
A teacher must use ----- resources in a class.	Low cost
An educator must work to stimulate the spirit of ----- among the students.	f inquiry

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What we do in schools, we never focus on the ----- level of learning.	higher level
Hierarchical levels of Simpson' Psychomotor domain are	7
The level of ----- to the profession must be to the range of every student.	commitment
is the mean of creating a dialogue	reflection
----- is the knowledge that is declared in books, research papers or newspapers.	Declarative knowledge
----- is the level of understanding.	Comprehension
Teachers need to know the ----- level of students.	
We must plan unit before -----.	lessons.
While evaluating teaching or students' learning, you should always come up with judgements based on -----.	t evidence
Planning serves a guide to -----.	action.
Lesson is a piece of a unit NOT a block of -----.	time
The process of setting goals, developing strategies is -----.	Planning

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In evaluation we discuss --- things.	two
Process cannot be isolated from -----.	All of above
IEP is basically ----- adaptation of lesson plan.	extended
If a teacher plans to take the students for field trips, then he needs to consider - -----.	schools" resources
Performance objectives must be aligned with -----.	curriculum
----- research is very effective research for teachers because it aims at improvement.	Action
The learning of ----- is lifetime.	core concepts
The average height growth of 6-12 years children in a year is -----.	
	ten
Learner can process only about one new idea or concept every ----- second.	
In ----- books there is a lot of information than Japanese and German books.	American
A preschool child of 36 months can now hold ----- different emotions in his mind at the same time.	two

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----- education is different from other education.	Pre-school and infant educations
Generative topics are generated from -----.	leant information
----- need to be interesting for the teachers as well as for students	Generative topics
----- integration method overlaps concepts as organizer.	shared
"Child is a natural discoverer" who gave this statement.	Bruner
----- are related to the lives of people.	Essential questions
In United States, pre-schooling is named as -----.	Pre-school
Learning depends upon the -----.	environment
The idea in ----- thinking is that no idea is a stupid idea.	divergent
Essential questions are related to the ---- of people.	lives
Brain development continues till the age of -----.	8
----- teacher should integrate two or three subjects so that we can save the time.	Primary school

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Core concepts are central to the domain of -----.	knowledge
Integration means putting things -----.	together
Because of integration it will be easier to ask -----.	essential questions
----- are most important persons in the application of curriculum.	Teachers
In British English, pre-schooling is known as -----.	nursery
----- construct their own knowledge.	Children
There are ----- physical developmental milestones used in pre-schooling.	
----- needs to be an integral part of early years of education.	Story time
----- are unique to every individual.	Experiences
Teachers mostly concern about -----.	completion of syllabus
Form 3 focuses on the integration of subject knowledge with -----.	Student's Interest
Bigger ideas are our assumptions and -----.	belief
----- theory is very much applicable in early childhood education.	Vygotsky

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The ----- curriculum is a great gift to experienced teachers.	integrated
passive rolesResearch has now determined that remarkable changes occur in the brain during the ----- decade of life.	second
Development cannot be separated from the -----context in which it occurs.	social
By the age -----, a child has TWICE as many brain connections as an adult.	
Gross motor and fine motor development is involved in -----.	Physical development
M. Markus was a ----- who gave the definition of integration.	
Which needs does a primary reinforcer satisfy?	Food oxygen warmth watre
Teachers get little assistance from ----- publishers.	textbook
The brain is not complete at -----.	birth
Essential questions require ----- thinking.	divergent
----- type of integration is related to shared integration.	sequenced
Networked integration is created between the -----.	learners

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----- is a dead thing teachers give life to it.	Curriculum
We need to integrate the knowledge with ----- skills.	practical
----- is a conceptual commitment.	Essential question
Through ----- it will be easier for the children to ask essential questions.	integration
Different countries use different names for pre-schooling, but the umbrella term for it is -----.	Early Childhood Education
There are ----- stages of Piaget's cognitive development.	4
Vygotsky's theory includes ----- major ideas.	four
Our teachers do not focus on -----.	core concepts.
----- integration is created among group of students.	Nested integration
----- integration takes advantage of natural combinations.	
Development of ----- skills is very important in preschool or early childhood education.	Gross motor
Forms of integration were presented by Fogarty and Stoehr in -----.	1995

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Work on scientific method was started by ----- to Galileo.	Aristotle
Cooperative learning method can help students develop ----- skills.	Communication
Piaget spend actually----- to work on constructivism.	50 years
The cooperative learning model changes the -----.	reward system
----- can be assessed through direct observation.	skills
----- is a model which requires student cooperation and interdependence in its task, goal and reward structure.	Cooperative learning
Cooperative learning methods are those in which more than ----- person work together.	one
Teachers role is minimized in ----- inquiry.	
In cooperative lessons, Students work ----- to master learning goal.	teams
Cooperative learning requires -----.	
Assigning different roles is a good thing in -----.	jigsaw technique

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Kagan (1994) roles have been adapted by -----.	Arends
cooperative learning help students make the ----- from whole-class to cooperative learning groups.	transition
In cooperative learning, ----- are oriented to the group as well as the individual.	Reward system
More than ----- of the researches says that cooperative learning helps in the academic achievement of the student.	
A special challenge for cooperative learning teaching is how to ----- for both team and individual efforts.	grade
Rubrics are actually instruments -----.	
In ----- teacher talk time is more than 50% of students talk time.	Recitation
----- functions are image and inform.	Concepts
----- create productive learning communities.	Effective teachers
Extended practice leads to -----.	Overlearning
Teacher control is ----- process.	authoritative
Peer tutoring is -----.	motivational strategy

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----- lose their significance after sometime.	External rewards
----- discussion is a teacher-centered discussion.	Monologic
----- is a teacher-centered method.	Presentation
Direct instruction keeps ----- in passive role.	students
Practice that is under the watchful eye of the teacher is called -----.	Guided practice
----- method is the example of discussion method.	
Teachers can obtain better classroom discourse by giving their students opportunities to think before they -----.	respond
Feedback should be appropriate and -----.	constructive
The base level of Maslow's Hierarchy of Needs is -----.	Physiological needs
Recitation is also called -----.	
Presentation is a ----- centered method.	Teacher
----- learning is a learner-centered method.	Discovery
Monologic discussion is ----- centered discussion.	teacher

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Dialogic discussion promote ----- thinking.	divergent
Discovery learning is a ----- centered method.	learner

In democratic process ----- are involved.	children
How many categories did Abraham Maslow believe that needs could be classified into?	5
Crossword puzzles is an example of ----- learning.	2. Incidental learning:
----- in classrooms does not flow just from the teacher.	Influence
Direct instruction lessons require the unique classroom -----.	management
Planning, implementation and evaluation comes in -----.	Teaching cycle
In ----- there is paraphrasing.	communication
----- is basically a discussion method.	
For learning activities, ----- centered learning methods must be preferred.	students

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----- is very much teacher controlled method.	Direct Instruction
Peer can be great ----- support.	
----- is the adding of an aversive stimulus to decrease a certain behavior or response.	Positive punishment
A ----- learning environment is a setting for learning that includes a controlled and often simplified copy of a real world system to be studied.	Simulation-based learning
The other name for presentation method is -----.	
Lecture only gives ----- knowledge.	declarative
----- are done in the virtual environments and are computer based.	Simulation
Presentation is also known as ----- method.	
The last level of Maslow's hierarchy of needs is -----.	Self-actualization
A lot of information is not important ----- information is important.	depth of
Measuring is a ----- process.	inquiry

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----- has its intellectual roots in the Socratic Method.	Problem Based Learning
Bruner's final stage is -----.	Symbolic
Life is not divided into little blocks of -----.	subjects
Inquiry may involve problem, procedure and -----.	Solution
Aristotle promoted -----.	deduction
----- is a condition of partial or total impairment of sight or vision that even with correction affects educational performance adversely.	Blind and Low Vision
----- knowledge is acquired, if a child only learns facts and memorizes content.	Procedural
Kinesthetic learning is also known as -----.	tactile learning
Teacher needs to have some perceptions and ideas if -----.	political activity
----- means the knowledge about how to teach the students.	Pedagogical knowledge
Where there is silence, there is no -----.	learning
Lev Vygotsky died at the age of -----.	37
----- are something that is memorized.	Procedures
Teaching is about bringing change in -----.	society

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----- knowledge is acquired, if a child gets cognition about cognition.	Metacognition
Holistic development means -----.	complete development
----- means that professionals are ethically bound to follow some norms.	Self-Disciplined
Master teachers ----- instructional objectives to the students.	communicate
There are ----- stages of Zone of Proximal Development.	
----- means that students may get any change in their behavior.	Behaviour prospective
Learners need ----- on everything they do.	feedback
There are ----- categories of exceptionality.	27
----- is something that emphasizes that power and decision-making should be shared among some or all members of the organization.	Collegial context
----- is the procedure to gain declarative knowledge.	lecturing
Every student has different ----- of learning.	Potential
----- is also a conceptual change.	Teacher growth

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----- means social interaction among the students or the other people as well.	
There are ----- types of instructional planning that are commonly used in schools.	
Vygotsky was a ----- psychologist.	Rushinan
----- is the mean of creating a dialogue.	reflection
----- are thoes objectives which need to be achieve by the end of lesson.	Instructional objective
----- is a way of studying your own experiences to improve the way you work.	Reflective practis
There are ----- kinds of diversity.	3
Teacher is more interested in ----- instead of conceptual change.	Covering sylabur
Which educationist gave the below statement; "What students are taught in schools affects the ways they will thereafter see and treat others"	sausa
----- means that students may get any change in their behavior.	Direct instrucation
----- knowledge is a step ahead of declarative knowledge.	Procedural knwledge

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Gender diversity means ---- in gender.	Difference
In -----, the student must be dissatisfied with the current understanding.	
----- is the name of degree that a person must get to join teaching profession.	B ed M ed
In ---- teachers do not have autonomy or the power of decision making.	Pakistan
----- context of school is "Characterized by or having power and authority vested equally among colleagues:"	collegial
According to Gagne, ----- knowledge is "knowing that...."	Metacognition
The gap between actual and potential level of a child is -----.	Zone orf prox dev
Theory of multiple intelligences was presented by Howard Gardener in -----	1983
----- knowledge comes in psychomotor domain.	procedural
Different cultures have different perceptions about -----.	eduucation
Declarative knowledge is more or less equivalent to Bloom's ----- category of learning outcomes.	

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----- is very famous because of his theory of multiple intelligences.	hHoward gardner
The ----- of our colleagues is the foundation of power.	esteem
At second stage of zone of proximal development, a child gets assistance from -----.	Direct instr
----- is where human mind is actively involved in constructing meaning of the experience.	Active learning
----- perform poor in mathematics and science.	girls
-----	method
Teachers must give ----- to the students	Constructive feedback
to maximize learning.	
----- is a fixed capacity.	intelligence
The 'basics' of the ----- curriculum are mathematics, natural science, history, foreign language & literature.	
----- plan is actually detailed form of unit plan.	lesson

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You have to create a check list for assessing----- skills.	Communication skill
Being aware of or sensitive to the existence of certain ideas or phenomena and being willing to tolerate them is called -----.	receiving
Teachers rarely plan in ----- as encouraged in textbooks.	Linear plan
Mechanism indicates that a child is ----- to do a task by following its mechanics.	independent
Precise statement means ----- statement.	An exact
There are ----- elements of performnce objectives.	3
Lesson plan starts with the -----.	subject
When teacher provides guidance to the students, then there is -----.	semantic
This is not true that if the learning cannot be ----- then there is no learning.	accessed
You will organize the ----- in such a way that you will ask them to first observe and then record.	accessment
Curriculum guides are planned by -----.	Ministray of edu

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----- is one of the famous models of curriculum development.	Tyler
In curriculum planning ----- is taken into consideration.	assessment
The second name of performance objectives is -----.	behaviour
Curriculum guidelines are consists of -----.	
----- is defined as "a systematic design for the development, implementation and evaluation of instruction".	Lesson plan
In ----- level of cognitive domain, students recall their knowledge.	synthesis
While planning a unit a teacher needs to identify -----.	all
Curriculum guides actually give us a guide line about what to be taught in different -----.	Grad level
The first three levels of cognitive domain are called as -----.	lower
----- policy is to cover the content.	school
The common thing in Tyler's model and Bloom's taxonomy is that the teachers observe the -----.	

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The focus in IEP will be on the ----- of the learners rather on the content to be taught.	need
To write ----- is necessary, especially when we are going to start teaching.	performance
----- is basically an extended adaptation of a lesson plan.	IEP
----- are usually assessed through analysis method or through observation.	process
----- changes were made while revising Bloom's taxonomy.	
Good textbooks provide ----- sequence of lessons.	structured
----- means that the disposition or learning you are talking about, you must value that disposition.	valuing
IEP is the abbreviation of -----.	Indiv edu plan
Lesson plan is a part of ----- plan.	unit
The best teachers apply planning -----.	flax
The individualized part of IEP means that the plan has to be tailored specifically to your child's special -----.	need

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----- is something which indicates division of time.	all
Post lesson activities are related to -----.	evelatiton
We can do classifying in ----- children also.	
Learning is a permanent change in -----.	Behaviour
In ----- inquiry, students investigate topic-related questions that are student formulated through student designed/selected procedures.	
Historical drawings and paintings are used in ----- inquiry to stimulate questions.	historical
Andragogy means how ----- learns.	Children
----- inquiry involves the processes of searching for information and applying information to answer questions.	Designing instruction
Different countries have different age levels of ----- education.	informal
The important thing in ---- is what we know we must share it with others.	Problem solving method
Pedagogy means how to teach -----.	children

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By the -----, a child has TWICE as many brain connections as an adult.	three
The solutions, alternatives or responses provided by learners are not found in -- -----.	textbook
----- are those which are linked with core	
concepts.	
Piaget spend ----- years to work on constructivism.	50
Most classroom ----- proceeds at too rapid a pace.	discourse
----- keeps students in passive roles.	Direct instruction method
If projects are -----, they allow the learners to be immersed in one big idea.	Structured
In ----- the most important thing is assigning the tasks.	management
Roots of problem based learning are in -----.	Dialogue
Inquiry is a ----- technique.	
----- is very useful learner centered teaching and learning strategy.	Problem solveing
Aristotle talks about -----.	2

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Students work in teams to master learning -----.	
Vygotsky was a----- Psychologist.	russian
The most important thing in thinking skills is to provide the -----.	information
In project learning, performance is assessed on ----- basis.	indivial
----- is overall pattern.	
In ----- inquiry, teachers role is minimized.	Unguided
In cooperative lessons, ----- are oriented to the group as well as the individual.	
Inquiry may involve -----, procedure and solution.	

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