

**KENYA TECHNICAL TEACHERS COLLEGE
EDUCATION DEPARTMENT
GENERAL METHODS COURSE
44 hours**

GENERAL COURSE OBJECTIVES

By the end of the course the learner should be able to:

- Understand what is involved in the process of teaching and learning,
- Explore how best to go about teaching successfully in a variety of situations.
- Know how to prepare schemes of work for a course.
- Know how to Prepare lesson plans
- Choose appropriate methods of teaching
- Use appropriate methods of teaching
- Justify the choice of particular methods of teaching.
- Understand how to motivate learners
- Know how to administer examinations

COURSE SUMMARY/TIME ALLOCATION

DATE	LECTURE TOPICS	SUB-TOPIC	ME
	1. INTRODUCTION	-General course objectives - Definitions of concepts and terms used. -Qualities of an effective teacher.	
	2. TAXONOMY OF EDUCATIONAL OBJECTIVES	- Definitions -Cognitive domain, - Psychomotor domain, -Affective domain and sub-categories within each domain.	
	3. GOALS OF EDUCATION	- Definitions - General objectives - Specific objectives - qualities of good specific objectives	

		<ul style="list-style-type: none"> - Advantages of stating specific objectives. - Examples of specific objectives. 	
	4. PLANNING FOR INSTRUCTION	<ul style="list-style-type: none"> -Definition of planning -Advantages of planning -scheming -Need for the scheme of work. -Considerations to be born in mind. -Components of the scheme of work 	
	5. SCHEMING (For a theory lesson)	<ul style="list-style-type: none"> -scheming layout, objectives, key points and other components. -Practical scheming -sample Scheme Assignment on scheming	
	6. LESSON PLANNING (For a theory lesson)	<ul style="list-style-type: none"> - Importance of a lesson plan - Lesson plan Layout (KTTC format) - Elements of a lesson plan. - lesson planning Assignment on lesson planning	
	7. MOTIVATION	<ul style="list-style-type: none"> -Psychological explanation of motivation. -Theories of motivation. 	

		<ul style="list-style-type: none"> -Types -motivational influences, -principles related to motivation, -guideline for effective motivation, -how to sustain interest in the classroom -effective class management. 	
	8. EVALUATION AND ADMINISTRATION OF EXAMINATIONS:	<ul style="list-style-type: none"> -preparation before, during and after examinations, -purposes of examinations 	
	9.TUTORIAL TOPICS METHODS/TECHNIQUES OF TEACHING <ol style="list-style-type: none"> 1. Group work 2. Individual assignment 3. Project 4. Lecture 5. Demonstration 6. Field trip 7. Questioning 8. Case study 9. Role play 10. Experimentation 11. Programmed 12. Attachment method 13. Team teaching 	<ul style="list-style-type: none"> • definition • types • appropriate situations • inappropriate situations • preparation • presentation • advantages • disadvantages • how to improve the method. 	

	14. Discussion 15. E-learning		
	REVISION AND EXAMINATIONS		

EVALUATION

1. CONTINUOUS ASSESSMENT

SCHEMING

30 MARKS

LESSON PLANNING

30 MARKS

GROUP PRESENTATIONS

40 MARKS

TOTAL

100%

2. FINAL EXAMINATION

100%

TOPIC ONE INTRODUCTION

LEARNING OUTCOMES

By the end of this topic the learner should be able to;

- Understand all terms and concepts used in General methods.
- Differentiate teaching from learning.
- Appreciate the qualities of an effective teacher.

DEFINITION OF TERMS/CONCEPTS**Curriculum:**

A curriculum is all the experiences and programmes of learning that are given under the guidance of a school. It includes all forms of activities, lessons, subjects and skills given under the responsibility of the school to contribute to the mental, social and physical development of the learners. When designing a curriculum the following factors should be born in mind;

- The society
- The learners needs and abilities
- The national philosophy and life style towards which the whole society is striving for.
- The skills which individuals need to develop or acquire in order to serve the society.
- Resources necessary for implementing the curriculum.

Syllabus:

A syllabus is a broad sketch or outline of what is envisaged to be

covered within a given level of learning for a certain period of time. It is usually developed for a particular level and is a blue print that indicates the theme, sequence and depth of the content or materials to be covered and for how long. Therefore a syllabus is a curriculum document whose functions are as follows;

- It provides a means through which the government controls the education provided in its schools and ensures common learning content in all public schools.
- It guides the teacher in preparation of good schemes, which will lead to effective lesson preparation.
- It enables school inspectors and head teachers to check whether the desired standards are being reached.
- It helps in limiting the scope of the examination as examiners base their questions on the content of each syllabus.

Scheme of work:

A scheme is a summarized forecast of work, which the teacher considers adequate for his class to cover within a given period from the topics set in the syllabus. It is prepared for every class within a level.

Lesson plan:

This is a guide of how the content of the lesson notes will be delivered to the learners.

A lesson:

A lesson can be described as a single activity or a series of activities designed by a teacher so as to achieve educational objectives determined as necessary in promoting positive change in the learners.

Teaching:

Teaching can be defined in different ways;

- a) A teaching process can be defined as a cyclic chain of activities where the teacher's confrontation with learners in the classroom is only a point in the cycle as he plays the following interrelated roles;
1. The teacher is a planner- what he does must be carefully planned.
 2. The teacher is a craftsman.

- Presenting learning materials in an interesting manner.
- Illustrating, demonstrating and explaining
- Asking and answering questions
- Giving out assignments to learners
- Correcting such assignments
- Praising learners who behave properly and helping or punishing those not behaving.

3. The teacher is a decision maker- he constantly asks the questions what next? and how? as he studies his society, the school system, and the subject matter.

Teaching is supposed to promote learning.

b) Teaching can also be defined as a process in which the teacher initiates a set of activities in which his/her learners take part so that the result is acquisition of knowledge, skills and/or attitudes that would bring about relative desirable changes in the learners. These changes may take the following 3 forms;

- i. They may lead to an increased store of useful information and understanding of basic principles in the subject matter.
- ii. They may lead to acquisition of skills, abilities and habits i.e. psychomotor skills that are physical competencies required in order to perform certain activities efficiently.
- iii. They may lead to possession of desirable attitudes or ideals such as developing satisfactions about learning outcomes or achievement.

Therefore effective teaching contributes to understanding, improvement of abilities and development of desirable attitudes and skills.

Conditions for teaching

In order for teaching to take place, the following conditions must prevail:

- i. A teacher must be available and willing to teach.
- ii. The intention/ objective for teaching.
- iii. Content or subject matter
- iv. Learner/audience willing to learn or be taught.
- v. Environment such as classroom where teaching will take

place.

In teaching, the teacher passes information intentionally about an object, person, process or skill to a learner or a group of learners.

Learning

Learning is a change or a modification of behavior or response as a result of some form of experience.

It refers to numerous different processes, which result in a relatively permanent change in behavior as a function of experience, training and practice.

Meaning of the definition:

Result in; Learning is not directly observable but it is inferred from performance i.e. when a student passes an exam.

Relatively Permanent;

The change should last for a long period of time meaning that the student should be able to remember the behavior.

Change in behavior;

Behavior consists of actions that can be sensed e.g. observed activities from a learner in class i.e. drawing, writing notes, calculation of sums correctly are changes in behavior.

Conditions, which facilitate learning:

1. The degree of the individual learner's readiness for what we want him to learn.
2. Interest in what he is expected to learn.
3. Motivation or having a strong desire to learn
4. General intellectual ability etc.

Stimulus mechanisms:

The learning process involves stimulus mechanism processes. Stimuli are factors that influence individual's response. They are internal or external factors, which an individual comes into contact with, or interacts with. They could be an object or occurrence which

may influence the individual's sense organs and arouse within him a sensation, an idea, a concept or even movement which results in some kind of reaction or response.

Response:

A response is an action which results from stimulation and subsequent number of activities and can range from simple reflex action i.e. 'blinking of the eye' to a very complex operation e.g. running away.

NB: This implies that learning can take place without active participation of the teacher but it can not take place without active participation of the learners.

Education

Education is both a process and a product. As a process Education transmits values from one generation to the next. These values include knowledge, skills and attitudes deemed important to the survival of the society.

As a product Education is the sub-total of acquisition of the values, which is usually evident in certification. Thus education has a dual purpose as it not only helps the individual but the society as well. The real characteristic of Education is that it emphasizes on all round development of the individual e.g.

- Physical development of the person (e.g. his size, health, looks and physical fitness)
- Emotional development (the way he feels and expresses his feelings)
- Social development (the way he relates to other people in his environment and the way others feel the effect of his behavior towards them).
- Intellectual development (the way his "brains" work, his reasoning ability etc).

In other words all human faculties (the physical, the emotional, the

social and the intellectual) make up the personality traits that must be nurtured through education.

Major tasks of education:

- i. Nurturing the individual's emotions so that they are controlled and exhibited in ways that are not harmful to other people (can he control his tempers?)
- ii. Nurturing the individual so that he grows up to interact in a socially approved manner with other people in his society.
- iii. Education should prepare one for life in society.
- iv. Education helps one learn accumulated wisdom of his society.
- v. Helps one to learn to live in the society and interact with other people.
- vi. Helps one to Learn to survive in a given society by acquiring knowledge and skills which enable him earn a living, take care of himself, understand his rights and responsibilities and contribute his quota to the development of the community.

As long as we are alive we are constantly learning and acquiring new knowledge, new insights into problems, adjusting to changing times and environments – education is therefore a continuum that runs from cradle to the grave and the years spent on formal schooling are just a point along the continuum.

QUALITIES OF AN EFFECTIVE TEACHER;

Since teaching cannot take place without a teacher, it is important to understand the qualities necessary for one to be an effective teacher. He or she should;

- Have command on theoretical knowledge about learning and human behavior.
- Display attitudes that foster learning and genuine human relationships i.e. should have a positive attitude towards himself, colleagues, the administration, his learners, their parents, the subordinate staff and the teaching profession as a whole.
- Have a command of knowledge of the subject matter that he teaches. This includes having a good mastery of the techniques of teaching and ability to communicate effectively.
- be eager to gain more knowledge in the subject area so as to keep abreast with current developments.

- Have a command of technical skills of teaching that facilitate learning.
- Explain difficulties patiently.
- be responsible and aware of what is entrusted to him and work in the interest of his learners.
- Be physically and morally fit in order to be a role model.
- Be just and truthful – impartial.
- be a good decision maker.
- Have good counseling qualities in learners' problems and needs be it social or educational/academic.
- Be imaginative, good planner and listener.
- Be alert, enthusiastic and blessed with a sense of humor.
- Be a strong personality in what he says but should also be adaptable and flexible.
- Be Presentable i.e. clean and tidy.

A SUMMARY OF QUALITIES OF AN EFFECTIVE TEACHER

QUALITY	EXPLANATION	DEVELOPING THE QUALITY
a. Presentable	This is the way a teacher looks in a front of learners i.e. the mode of dressing, confidence, disposition, and physical composure.	Dress properly and be composed.
b. Patience	The teacher should be able to take time before he reacts to happenings. He should not harass learners but make calculated moves, not hasty decisions. He should be able to appreciate the	The teacher should show some restraints and get involved in some of the activities such as patronizing clubs even during odd hours. He should also try to help those learners with

	contributions of slow learners without any ridicule.	problems in learning during his/her free time.
c. Flexibility	The teacher should be able to adjust to new changes as opposed to following strictly laid down rules e.g. time budgets. It calls for resourcefulness and adaptability.	The teacher should solve problems as they arise, make adjustments to his/her programme and give students a chance to present their views.
d. Persuasive	A teacher should have power to influence learners in believing in education, that is, he should be determined and convinced about the objective/goal he intends to achieve.	Using polite and appropriate language, understanding the interests and problems of the learners he/she is dealing with and believing in the goals and objectives.
e. Initiative	This is the ability, willingness and the drive to start something without waiting to be instructed.	The teacher should join clubs /associations, and encourage class participation through role playing, drama, group discussion, debating, etc.
f. Good Listener	The teacher should be patient enough to listen to the learners' problems, ideas, facts, contributions, and suggestions, and give necessary	The teacher needs to change or readjust his/her attitude towards people, events and problems, in order to achieve his/her

	direction.	objectives/goals.
g. Counselor	The teacher should be a knowledgeable problem solver who can give guidance as well as advice on various issues.	The teacher should be able to guide and counsel learners.
h. Organized	The teacher needs to prepare in advance, arrange work in a logical and sequential manner. He/she should present materials with confidence.	He should be organized by equipping himself/herself with relevant resource materials, as well as working in a suitable environment.
j. Decisiveness	The teacher should take a particular course of action at an appropriate time and come up with alternatives where necessary.	The learners to be given responsibility involving decision-making and to readily accept it.
k. Sociable	The ability to interact freely with people.	The teacher should interact freely with other members of staff and community.
l. Optimism	This is the tendency to view the future from its brightest side. For a teacher to be able to initiate any course of action he	The teacher must have a positive self-image and concentrate on the positive events that produce results.

	must be optimistic.	
m. Information Seeking	The desire to obtain information. Teacher should have an a quest for facts, data and take time to research for them.	He should have initiative and cultivate personal interest to obtain information.
n. Persistence	The teacher should appreciate that greatest glory is not in never failing but rising every time one fails. Fear or failure does not hinder acting. He should be persistent when carrying out his roles and make sure objectives are achieved.	Thorough training to master the subject and methodology for teaching it without getting frustrated.
o. Good Communicator	The teacher should be able to transfer the meaning of a message to the receiver, i.e. The message should be clear and understandable.	He should be always conscious of good language use.
p. Credible	A reliable, considerable, trustworthy and friendly personality.	The teacher should welcome self-examination to ensure that actions meet the expectations of the audience. Accept responsibilities and account for them.

q. Role-model	To be a role-model, a teacher has to be creative, innovative, goal-oriented, credible initiator with self-confidence, decision maker, devoted, competent and counselor. These qualities must be evident and observable in the behavior and actual operations of the teacher.	Examining one-self and getting involved in problem solving situations. Getting involved in forums for exchanging views and activities that others can emulate and accept responsibility.
r. Goal-Oriented	The teacher with the desire to achieve, optimistic, persistent organized and action-oriented.	Involved in tasks with attainable objectives.
s. Knowledgeable	A knowledgeable teacher portrays evidence of being an authority in a given subject and deals with issues wisely.	Attending seminars, reading and conducting research widely.

ACTIVITY



ACTIVITY

Think of other qualities of an effective teacher and note them down.

<p>TOPIC TWO DOMAINS OF LEARNING</p>
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LEARNING OUTCOMES

By the end of this topic the learner should be able to;

- Define a domain
- Classify domains of learning
- Understand the levels of learning in the different domains.

- Know what verbs to use when writing objectives for the different levels.

Domain:

A domain is a specification that shows the elements of teaching and learning and their interrelations.

Classification

According to Benjamin Bloom there are three domains of learning in which educational objectives can be classified;

- (i) Cognitive domain
- (ii) Psychomotor domain
- (iii) Affective domain

COGNITIVE DOMAIN

This focuses on the acquisition of knowledge/information; what a learner understands, comprehends or the information he/she has. This is the domain in which most of the work in the curriculum takes place. It has the clearest objectives and is the most central to evaluation. It has six levels.

Levels of cognitive domain

(i) Knowledge:

This level is concerned with memory or ability to recall or bring to mind the appropriate material learned. It's the lowest level of learning.

Some of the verbs used in objectives.

- Recognize
- Define
- Distinguish
- Recall
- Describe
- Memorize
- List
- Name

(ii) Comprehension

Refers to the ability to apprehend what is communicated and make use of the idea without relating it to other ideas or materials or seeing fullest meaning. It requires knowledge of facts, principles, conditions etc.

Some of the verbs used in objectives

- Restate
- Describe
- Recognize
- Explain
- Express
- Identify
- Locate
- Report
- Review
- Tell.

(iii) Application;

The learner is able to use knowledge learnt, ideas principles and theories to do other things. It requires knowledge and comprehension.

Some of the verbs

- Translate
- Interpret
- Apply
- Employ
- Use
- Demonstrate
- Dramatize
- Practice
- Illustrate
- Operate
- Schedule
- Shop

- Sketch.

(iv) Analysis

Is the ability to break down a communication into constituent parts to make the idea clear. It requires application, comprehension and knowledge.

Some of the Verbs

- Distinguish
- Differentiate
- Analyze
- Appraise
- Calculate
- Compare
- Contrast
- Inspect
- Debate
- Solve
- Examine.

(v) Synthesis:

It refers to the ability to put together parts and elements into a unified organization or whole. It requires analysis, application, comprehension and knowledge.

Some of the verbs

- Compose
- Plan
- Propose
- Design
- Formulate
- Arrange
- Collect
- Assemble
- Construct
- Create
- Set up

- Organize
- Manage
- Prepare

(vi) Evaluation

Is the ability to judge the value of something such as ideas, procedures and methods using appropriate criteria. It requires the above five.

Some of the verbs

- Judge
- Appraise
- Evaluate
- Rat
- Compare
- Value
- Revise
- Score
- Select
- Choose
- Measure.

PSYCHOMOTOR DOMAIN

This is concerned with how a learner moves or controls his body. It deals with motor or manipulative skills. The major concern is what the learner does. It requires a learner to manipulate, use a tool, or even to produce a product or to perform a routine. It involves motor skills that range from comparatively simple to move complex ones. It's easy to measure because one can identify overt student behavior. It has 5 levels.

1. Imitation: This is being able to observe what is being performed and be able to repeat.

Some of the verbs

- Find
- Locate
- Observe
- Recognize
- Sort.

2. Manipulation

This refers to selected action and fixation through practice following thorough instructional direction. It requires imitation.

Some of the verbs

- Build
- Operate
- Perform
- Demonstrate
- Play
- Construct
- Use
- Measure
- Draw

3. Precision

Refers to reproduction of performance with errors reduced to a minimum, it requires the above 2.

Some of the verbs

- Build
- Measure,
- Perform
- Demonstrate
- Play
- Write
- Express
- Construct
- Run
- Use.

4. Articulation

This refers to performance, which involves accuracy and control, plus elements of speed and time. It requires the above 3 levels.

Some of the verbs

- Adapt
- Create
- Draw
- Mend
- Manipulate
- Plan
- Produce
- Promote
- Regulate
- Research
- Teach
- Instruct.

5. Naturalization

This refers to a situation where action is performed without hesitation, leading to automatic and smooth performance.

Some of the verbs

- Create
- Draw
- Contract
- Make
- Produce
- Plan
- Regulate.

AFFECTIVE DOMAIN

It refers to learning that involves changes in attitudes, values and interests. It leads to development of appreciation and acquiring the

ability to make proper adjustment. Objectives in this domain are not stated very precisely because they touch on internal/covert feelings and emotions which can not be easily manifested or observed. It is therefore more difficult to teach and to evaluate. However this domain is very important because students can not learn if they lack interest and motivation. A teacher has to ensure that learners have positive attitude and their interest is aroused for learning to take place. It's classified into the following levels.

1. Receiving/ attending

Involves becoming aware of an idea, process or a thing and one is willing to learn and try a particular behavior. It involves controlled or selected attention.

Some of the verbs

- Observe
- Be conscious
- Realize
- Be sensitive
- Attend
- Listen
- Discriminate
- Be alert

2. Responding

This refers to the ability to make a response at first obediently, later willingly and with satisfaction.

It begins with attending/ receiving until one eventually enjoys it and gets involved.

Some of the verbs

- Comply
- Obey
- Look
- Engage
- Participate
- Extend

- Explore

3. *Valuing*

Is the process of accepting the worth of something, idea or behavior, until one prefers it and works to further it as a value and develops a commitment to it. It deals with the development of attitudes, beliefs and values concerning such objects as self, others, society, social institutions and culture. It involves attending/receiving and attending.

Some of the verbs

- Derive
- Participate
- Assume responsibility
- Grow
- Examine
- Influence
- Prefer
- Accept
- Devote
- Be loyal to.

4. *Organization*

Here, the internalized values are organized in hierarchical manner i.e. acquired attitudes, values and beliefs are organized into a pattern and ranked according to their order of importance. It involves the above 3 levels.

Some of the verbs,

- Crystallize
- Form judgment
- Relate
- Weigh
- Be realistic
- Judge
- Regulate.

5. *Characterization*

This is generalization of selected values and the behavior of the individual is controlled by these values and not emotions. Thus the behavior is not exhibited emotionally but is part of a value system.

Some of the verbs

- Be ready
- Revise
- Change
- View
- Approach
- Plan
- Arrive
- Rely
- Find
- Examine
- Judge
- Be consistent
- Be conscious.

SUMMARY

The lower levels of this domain (receiving and responding) are a direct concern to schools while the upper levels are a direct concern to society i.e. churches. The individual increasingly assumes responsibility for his own development in the upper levels and the school is just one of the agencies.

Learning in the three domains is important. However, many books on educational objectives lay emphasis on the affective domain as philosophers and scholars consider education as a means of making a 'good man' or a well behaved or disciplined man rather than a man of intellectual achievements and physical prowess.

Evaluation on the other hand has concentrated on cognitive and psychomotor domains. The affective domain has not been formally evaluated. This imbalance in the domains has led to graduates who are highly learned but not educated in the real sense. Therefore there is need to include all the domains of

learning.



ACTIVITY

*In your opinion, which of the three domains of learning is superior in as far as realization of educational objectives is concerned?
Give reasons to support your answer.*

LEARNING OUTCOMES

By the end of the topic the learner should be able to;

- Understand the difference between a goal, a general objective and a specific objective.
- Know how to construct general and specific objectives.
- Understand the advantages of writing specific lesson objectives.

A goal

A goal is an aim or purpose of doing something.

An educational goal

An educational goal is a general statement of aim or purpose of education that is stated as broad long-range outcome that is to be achieved.

Goals are used in policy making and also in general programme planning e.g. an educational goal for the 8.4.4 system – self-reliance.

General objectives:

It's an intended outcome of instruction that is stated in general terms. A general objective starts with a verb of internal state such as KNOW, UNDERSTAND, COMPREHEND without adding repetition. This keeping the statement free of unnecessary words helps to focus the attention directly on the nature of the intended outcome e.g. by the end of the course, the learner should be able to:

- o Know the sources of water
- o Understand the composition of air
- o Comprehend the meaning of written materials.

Specific objectives (instructional objectives)

Instructional objectives are intended outcomes of instruction that are

TOPIC THREE EDUCATIONAL GOALS
--

stated in terms of specific and observable learners' performance. They are related to the stated general objective of topic. They are

precise in nature and they enable one to observe and measure the desired learning outcome.

The verbs used in formulating these objectives are precise and indicate definite observable responses.

HOW TO CONSTRUCT:

1. General objectives;

They are constructed by use of behavioral verbs of internal state such as know, understand, comprehend, internalize, enjoy, appreciate, learn, believe, and be aware.

2. Specific objectives;

These are constructed using action verbs which are precise, specific, observable and measurable such as list, identify, calculate, demonstrate, contrast, distinguish, illustrate, clarify, discriminate, apply etc.

Specific objectives can be written in many ways. They should begin with a stem such as;

- By the end of the lesson, the learner will be able to;
- By the end of the lesson, the learner should be able to;

A well stated objective should state the performance, the condition under which it is expected to occur, the standard to be reached and the degree of performance.

Examples of specific objectives

By the end of the lesson, the learners should be able to;

- Distinguish the internal parts of a flower correctly in five minutes, given a freshly plugged flower.
- Change the wheel of a car accurately in twenty minutes, given a car, a spare wheel, a spanner, and a jack.

Specific objectives should not have more than one action at the same time, or it will be considered **loaded**. Thus it should be specific and precise in nature and only focus on a single activity. When writing objectives, it is important to consider the three domains of learning. Objectives should also be written in a logical sequence reflecting their order of achievement which should be

from simple/ known to complex/ unknown.

Advantages of writing specific lesson objectives

- The teacher is able to select suitable learning experiences and materials for the lesson in advance.
- Stating what the learner should be able to do after instruction makes it easier to decide whether or not the programme for instruction has been successfully planned.
- With clearly specified objectives, it is easy for the teacher to achieve them and suggest a means of evaluation or assessment.
- When learners are told in advance what is expected of them before instruction begins, this information serves three useful functions;
 - (a) Helps students organize their thinking for new learning.
 - (b) Helps them to channel their effort to relevant activities.
 - (c) Help them to know what is expected of them.
- Behavioral objectives enable the teacher to communicate his teaching intention to himself. This awareness leads to purpose in teaching and learning. The teacher puts more effort so that most learners in his class achieve objectives set.
- Objectives help the teacher to structure the content of the lesson. Objectives being precise in nature and logically sequenced, the structure of material of the lesson follows the same pattern. This presentation makes is easy for the presentation of the teacher and for the learning.
- Objectives enable the teacher to determine present level of mastering for prescribed objectives for a time.



ACTIVITY

Choose any topic from your subject area and construct;

- 1. General objectives for the topic.*
- 2. Specific objectives for one of the lesson titles in the topic.*

TOPIC FOUR PLANNING FOR INSTRUCTION
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LEARNING OUTCOMES

By the end of this topic, the learner should be able to;

- Define planning
- Understand importance of planning for instruction.
- Plan for instruction.

What is planning?

Planning refers to, first an effort to foresee and prepare for all the deliberate actions and as many of the contingencies as possible.

For a teacher, planning for instruction includes;

- Selecting and organizing the subject matter to be taught.
- Choosing appropriate illustrations and analysis.
- Deciding on the amount of time to be devoted to each aspect of the lesson
- Choosing of teaching methods to be used
- Obtaining the necessary teaching aids
- Checking the technology that will be used.
- Outlining the procedures that will be followed to see the lesson to the end.

Advantages of planning

- Helps the teacher clarify his/ her thinking about the contribution the Subject makes to the educational goals.
- Ensures that relevant instructional materials and procedures are considered.
- Serves to make the teacher more resourceful in identifying the

learners' needs and interests so as to provide the necessary motivation.

- Reduces trial and error in teaching through a better organization of curriculum materials.
- Ensures use of more appropriate methods and greater economy of time.
- Enables the teacher to win respect of learners.
- Presents opportunities for continuous professional growth.
- Aids the teacher recapture his enthusiasm.

Meticulous planning is therefore very necessary. A teacher can ensure this by preparing schemes of work and lesson plans before attempting to teach any lesson.

THE SCHEMES OF WORK

The Webster's new world dictionary defines a scheme as;

- a carefully arranged and systematic program of action for attaining some objective or end.
- an orderly combination of things on a definite plan system, or
- an analysis or summary in outline or tabular form.

A scheme of work should strive to include the above qualities given by Webster: - A careful, orderly and systematic program of action for attaining some stated objectives.

Factors to consider when scheming;

- The syllabus: this has been structured and prepared in line with the national goals and principles in mind and spells out the general objectives to be achieved after careful completion of the syllabus.
- The fraction of the syllabus the scheme of work will cover: is the scheme of work prepared for a week, a term or a year?
- The order of the different topics/subtopics from the syllabus into the scheme of work.
- The term calendar and school interruptions e.g. public holidays, examination dates, games, etc.
- Resource materials available which includes reference

materials and teaching aids.

- The nature of examinations for the level being schemed.
- Experience from previous years: the existing schemes of work within the institution.
- Syllabus content of related subjects.
- Learners' abilities, interests and entry behavior.

SIGNIFICANCE OF COMPONENTS OF A SCHEME OF WORK

ADMINISTRATIVE DETAILS / MINOR COMPONENTS;

a) Name

Name of the teacher preparing the scheme of work.

b) Institution/School

Refers to the institution one is teaching in.

d) Subject

This refers to the subject being schemed for. It may be theory or practical. For example office practice, Economics, Business finance, Accounting etc. Subjects should be written in full to avoid misinterpretation. E.g. Business finance not BF.

e) Level/Classes

In institutions/colleges, level refers to grade/sections CPA while class refers to the specific stream e.g. "B" stream. In case of college or other institutions various means of identification of level and classes are used. E.g. Year 1, stage 2, Beginners, intermediate, Advance etc.

f) Term

Term for which scheme is prepared i.e. term 3

g) Number of students

Number of students enrolled in the class.

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h) Date of preparation

It is important to indicate when the scheme was written so that it is evident from the date whether it is current or not. The teacher makes efforts to complete the scheme before teaching for the term starts.

i) Date of revision

A scheme may be written once but revised in order to accommodate the unforeseen interruption, new developments in the study area and the unexpected difficulties.

j) Syllabus topic

This is a major division or section of the subject's syllabus content large enough to be covered in several weeks. A topic should appear on every page of a scheme of work. Each new topic should begin on a new page.

For example in HOME SCIENCE the syllabus topic may be GOOD GROOMING.

k) Sub-topic

These are sub-divisions on topics. They are usually large enough to be taught as distinct lessons. The syllabus topic "GOOD GROOMING" could have the sub-topics;

- Personal hygiene.
- Care of personal belongings.
- Use of cosmetics.

MAJOR COMPONENTS

a) Week

Since scheming is planning it is paramount that there should be an indication of when a given topic or sub-topic will be covered. The usual way to do this is to indicate the week in which each lesson will be covered. The numeral representing the week should be distinctly

written centrally in the week column. A line passing across the page when one page contains more than one week should separate weeks.

b) Period number

A subject may have one, two or more periods per week. Some periods may be single, double, triple or otherwise. Numbering of periods can take two forms.

(1) The ordinal system, which refers to the order in which periods for that subject appear on the timetable. If for example there are 7 periods for a subject in one week where periods 1 and 2 is double, periods 3, 4 and 5 are single lessons and periods 6 and 7 double then the numbering should be as follows. 1 and 2, 3, 4, 5, 6 and 7.

(2) The cardinal system which refers to how many or the total number of periods in the lesson. In reference to the above example, the number of periods shall be as follows; 2, 1, 1, 1, 2.

In either system, numbering should be done as reflected on the timetable for that subject. Ordinal system has been found superior as it provides for the order of lessons and indicates whether a lesson is a double, a single or otherwise. Hence it is the preferred method.

A line beginning from the column of period No. should be drawn straight across the page to separate two lessons appearing on the same page.

c) Lesson title

A lesson title is derived from a sub-topic. It constitutes what can be covered in one lesson, be it single, double or otherwise. It should be precise. When a lesson title is so broad, it can be subdivided into subtitles.

d) Objectives

A complete and useful scheme of work includes specific objectives for each lesson title. The objectives must be stated clearly and in measurable terms. They should be stated in terms of what the learner will be able to do as a result of instruction. The conditions under which the learner is going to perform and the degree of

acceptable performance should be included. The objective must be such that it is measurable at the end of the lesson e.g.

- ❖ The sub-topic “PERSONAL HYGIENE” May have a lesson title CARE OF THE SKIN which might have the following objectives;
By the end of the lesson the learner should be able to;
 - define the term skin
 - draw the diagram of the skin
 - explain the functions of the skin.
 - describe how to care for the skin.

It is important to note that the specific nature of a lesson title does not permit broad objective(s), which might not be achieved by the end of the teaching period. Objectives should also be stated in the logical order of achievement.

e) Key points

These are the sub-titles within a lesson title and they are linked to the lesson objectives. These are the central ideas around which the teaching will revolve, or the main points the teacher expects to use during the lesson in order to achieve the objectives set.

Example:

Lesson title: PERSONAL HYGIENE.

Objectives	Key points
By the end of the lesson, the learner should be able to: 1. define personal hygiene. 2. state five factors in personal hygiene. 3. explain the characteristics	<ul style="list-style-type: none">• Definition of personal hygiene.• ----• Factors in personal hygiene.• ---• Characteristics of

of Hygienic kitchen clothes.	hygienic kitchen clothes. • ---
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f) Application/Activities

These are the learning experiences or tasks planned for the students to do during the teaching-learning process within and outside the classroom. By providing his students with these activities, the teacher expects them to put into practical use the concepts and skills that they are learning. Application/activities include: -

- ❖ Discussions or debates, homework assignments, observing a demonstration, education tours, writing reports etc.
- ❖ Students to do exercise 6. No. 1-20 Practical English Book 2. Pages 58-60 as homework.

Students' activities must be designed in order to realize and consolidate concretely the objectives of the lesson. Students' activities are different from teacher activities, which should be evident only in the lesson plan.

The activities require students to apply knowledge or skills imparted to them during the given learning period.

g) References and Teaching aids

(i) Reference

References are resource materials, which both the teacher and the student may use in covering the content schemed for. They include text books, journals, reports, laboratory and workshop manuals, handouts, worksheets etc. Ideally reference should be given for each subtopic or lesson title, however, where one or two textbooks are sufficient and always used, it is acceptable to write the full details of the same reference(s) at the top of the first page of the scheme of work and write the appropriate page(s) against each topic. The title, the author, the year of publication or edition of the book should be indicated. Teachers are encouraged to use more

than one reference book.

(ii) Teaching aids

As the teacher plans what to teach during a given time frame, he should also think of the most effective teaching aids he will use. These should be indicated in the scheme of work as they form an integral part of an effective lesson. They should vary with varying lessons. The writing, labeling, lines, and sound of aids etc. should be clear enough for all the students in the class to see or hear. Effective use of teaching aids may make a great difference between a poor lesson and an excellent one. As much as possible use actual things or realia (real things).

The chalkboard, chalk and duster are too obvious as teaching aids to be mentioned during every lesson. The teacher should therefore design and indicate others that will enhance learning. These may include charts, tables, puzzles, flashcards, actual tools, machines etc.

h) Remarks and date of teaching

The remarks column should be filled in immediately the lesson is over. The teacher is supposed to indicate whether what was planned for each period was covered. These may include over planning, under planning, success or failure of the lesson and reasons for either. Remarks made by the teacher are meant to help him in planning other lessons thereafter.

Remarks such as "Excellent", "Done", "O.K". "Well taught" etc are not useful unless a reason for the lesson being "Excellent" are briefly given. If the lesson was not taught when it was scheduled, the teacher should indicate that and give a brief explanation. Later, when the lesson is taught appropriate remarking should be done.

The date when the lesson was taught should also be indicated.

NB: In the assessment of a scheme of work the following factors are considered:

- Completeness

- Quality of the schemed work, objectives and key points are in good detail and are well structured.
- Concurrence with the syllabus.
- Appropriate sequencing of topics and sub-topics.
- Quality of reference books used- At least 2 books.
- Design neatness and legibility.
- Whether homework has been included under application.
- Tests and examinations included in the scheme to provide for evaluation, etc.
- Lecturer's enthusiasm and innovativeness in using a variety of teaching-learning aids etc.

COMPONENTS OF SCHEME OF WORK EXPLAINED

NAME: The teacher concerned.	LEVEL or STAGE	NUMBER OF STUDENTS: known No. of students to attend class
INSTITUTION: where one is teaching	CLASS: The specific group to be taught	DATE OF PREPARATION: Date completed not later than 2 after teaching commences.
SUBJECT: being schemed for - in full	TERM: vary from one institution to another	DATE OF REVISION

SYLLABUS TOPIC: A major division or section of the syllabus large enough to be covered within longer period.

SUB-TOPIC: Large enough to be taught as distinct lessons and titles are drawn from it.

Week	Period No.	Lesson Title	Objectives	Key points	Application or Activities	References & T/Aids	Remarks Date taught
- When a topic is to be covered. -Use a Numeral no. centrally in this column. - Weeks are separated by a line passing across the page.	1.Ordinal Order in which the periods appears on the time table.1&2 3 4 5 6&7 2.Cardinal How many period(s) per session 2,1,1,1,2	- A clear specific and concise statement, stating what the lesson is about. -Two separate periods indicated on the timetable in the same	By the end of the lesson the learner should be able to: -Clear precise statement, which articulates the aim of the lesson. - Describe intended	<ul style="list-style-type: none"> -Subtitles within a lesson title and are linked to objectives. -The central ideas around which the teaching will revolve. -The main points used during the lesson in order to 	Learner to: -Activities or tasks planned for learners during/ after the lesson within or outside the classroom. -planned in order to realize and consolidate	Ref. - Sources of information. -When one or two text books are sufficient and always used, write the full details at the top of the first	-Must be filled immediately after teaching. - Indicate whether or not what had been planned for was covered and how. - help the teacher

		day, be treated as separate lessons with two distinct rows. - Written in block letters.	changes in learner's behavior and defines the conditions under which the change may occur. -Should be stated in logical order of achievement. -Must be measurable at the end of the lesson.	achieve set objective. -should correlate with syllabus. -Be followed by key examples.	concretely the objectives of the lesson. HOME WORK -Not a must-only when deemed necessary. -Don't analyze activities with objectives.	S.O.W. and the appropriate page against each topic. T/Aids Selected equipment, materials and tools used to facilitate teaching/learning.	in future planning
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NB:

- ❖ Each new syllabus/section or topic should begin on a new page(sheet)
- ❖ Indicate P.T.O if title continues to the next page.
- ❖ Upper (administration) details and lesson title be indicated in block letters.
- ❖ A complete S.O.W must have revision and tests/examinations included in the Program schedule.

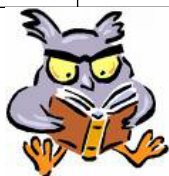
SAMPLE SCHEME OF WORK

NAME: Charles A.M	LEVEL Form III	NUMBER OF STUDENTS 35
INSTITUTION: Mwanainchi High School	CLASS IIIA	DATE OF PREPARATION 10/05/06
SUBJECT: Home Science	TERM: 2ND TERM	DATE OF REVISION 9/01/07

SYLLABUS TOPIC: HYGIENE SUB-TOPIC: PERSONAL HYGIENE

Week	Period No.	Lesson Title	Objectives	Key points	Application/Activities	Ref. & Aids	Remarks /Date taught
5	1&2	PERS ONAL HYGIE NE	By the end of the lesson the learner should be able to:- a) Define the term personal hygiene. b) Explain factors to consider in personal hygiene. c) Explain at least 4 characteristics of hygienic kitchen	a) Definition of personal hygiene. b) Factors in personal hygiene. c) Characteristics of Hygienic kitchen clothes.	Learner to :- a) Define personal hygiene. b) Discuss factors Considered in personal hygiene. d) Discuss characteristics of hygienic kitchen clothing. <u>H- work</u>	<u>REF</u> 1.Theory of catering 2 nd edition by Kinton page 13 -16 2. Form 3 KIE Home science page 40 -43 <u>T/AID</u> - Video	1.Lesson taught on- 2. Well taught. -Good learner participation.

			clothes.		Students to do exercise 5 No. 2 from Theory of catering by Kinton page 14.	on personal hygiene. - Hygienic kitchen clothes.	
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ACTIVITY

Using the sample scheme of work given, prepare a three week scheme of work for theory lessons in your subject area. Assume you have three periods in a week, one single and one double and you have 27 students (scheming format is at the back of the manual).

LESSON PLANNING

What is a lesson?

A lesson refers to a single activity or a series of activities designed by the teacher so as to achieve one or more instructional objective. It is a period of instruction or contact between the teacher and the learner. The duration of a lesson will vary depending on the subject, and the level of learners. This may be 40 minutes, 1 hour, 2 hours or more. Irrespective of its nature or length, all the activities that the teacher and the learner undertake constitute what is here called a lesson.

Lesson planning

Lesson planning refers to the process of planning ahead what one intends to deliver, and the activities to undertake in a specified period of time. In a learning set up, it is usually done on the basis of

the already prepared schemes of work (refer to topic on scheming).

A lesson plan

A lesson plan is therefore a systematic plan prepared by the teacher to serve as a guide on the lesson objectives and on how the teaching /learning process is to be conducted.

Lesson types

There are three types of lessons namely;

- A theory lesson
- A test lesson
- A practical lesson

Lesson planning involves the following:

- i) Identification of the objectives to be achieved in the specified time.
- ii) Identification of activities /tasks to be undertaken during the teaching-learning process.
- iii) Sequencing of these activities /tasks to enhance learning
- iv) Determining appropriate instructional aids, methods and references.
- v) Deciding on the proper organization and/or management of the learning environment, resources and activities.
- vi) Determining the evaluation process.
- vii) Allotting time to every step.

NOTE:

Lesson planning is not the same as making lesson notes. Lesson note making involves only preparing notes that are relevant to the lesson title. A lesson plan guides the teacher on how the content of the notes will be delivered to the learners. However, both are crucial components for a successful lesson and none should substitute the other.

PARTS/ELEMENTS OF A LESSON PLAN

a) Objectives: -

An objective is a clear precise statement, which articulates the aim of that particular lesson. It describes the intended changes in

behavior or skill mastery and defines the conditions under which the change is to occur. The objectives set must concur with those that have been specified in the schemes of work.

Objectives should be: **SMART**

- Specific
- Measurable
- Attainable/Achievable
- Realistic
- Time bound

b) Instructional aids: -

These refers to selected pieces of equipment, tools or materials that a teacher may use during the lesson to facilitate the achievement of the set objectives. The teacher should be innovative when selecting teaching aids. They should be geared towards appealing to as many senses as possible.

During planning list the charts, models, materials, equipment, tools and other aids that will facilitate learning. This list serves as an inventory.

c) Texts and references: -

These are resources from which the teacher has obtained information for the lesson. These may include class textbooks, library books, newspapers, magazines etc (Published or official material that is accessible to others).

When doing referencing, give the following:

- The book title
- Author(s) of the book
- The edition and year of the book
- The pages referred

NB. Avail at least two references.

PRESENTATION

(a) Introduction:

This is also known as set induction, which refers to the initial instructional move of the teacher in the class room. An enthusiastic

and well-planned introduction will help to develop interest and motivate the students to want to become involved with the lesson.

A good introduction may include: -

- calling the register
- reviewing the content of the previous lesson through question and answer.
- telling a brief story or incident/episode which is related to the issues covered in the lesson.
- introducing the lesson– writing lesson title on c/board.
- stating the objectives of the lesson
- Indicating where and when the students can use what they will learn in the lesson.

NOTE

Repetition is always necessary for effective introduction. This ensures that essential information is emphasized.

Think through previous lessons and jot down in your plan certain key points that need re-emphasis or re-teaching before the current lesson can proceed smoothly.

Review should be short and captivating. Use of question and answer could be considered.

(b) Body of the lesson/lesson development

This is the core of the lesson and contains interwoven elements. The teacher indicates what will be happening at the different stages as the lesson progresses. The number of steps indicated will depend on the length of the lesson and the nature of the content to be covered.

Steps should reveal: -

- The exact content to be taught
- The order in which it will be taught.
- The method that will be used to teach

- The activities of the learners
- The activities of the teacher.
- The use of teaching/learning aids
- Time estimate.

(c) Summary and Homework

This indicates how the teacher intends to bring the lesson to a logical conclusion. The possible ways include:

- Reviewing the content covered by asking the students questions on what has been covered.
- Giving an overview of the lesson just ended.

The teacher may use both methods to summarize the lesson. However, if one method is selected, the preferred one is the question-answer approach as it provides the teacher with feedback on how well the students have learnt. With the review approach, the teacher is not sure if the students are with him/her or are absent minded or whether or not they understood what was taught.

The teacher needs to do some follow-up to what has been taught. This may be in the form of an assignment that requires the learner to read further, or answer some given question(s).

(d) Remarks

Remarking is done after the lesson has been delivered. It also indicates what has not been completed or what has not been covered all together. It is the teacher's evaluation of the lesson. This should be made meaningful so as to be of help to the teacher at a later date. Do not for instance just say; "The lesson was done well" Add something on why you feel it was effective or not. This helps in making adjustments or retaining what was good.

Importance of lesson planning

1. Prior to presenting the lesson it is important for the teacher to "think through," or visualize how the lesson will be taught. This is done through lesson planning.

LESSON PLANNING EXPLAINED				
NAME	LEVEL	NO. OF STUDENTS	DATE	TIME
INSTITUTION	CLASS		SUBJECT	

LESSON TITLE		WEEK
SPECIFIC OBJECTIVES: <ul style="list-style-type: none"> • Stem • SMART • Procedural-simple to complex • Domains-levels 		
TEACHING AIDS <ul style="list-style-type: none"> • Variety • good quality 		
REFERENCES - at least 2 -Title, Author, Year of publication/Edition and page number.		TIME ESTIMATE (MIN)
PRESENTATION Introduction -Start with a bhang-interesting creative –motivating -outline objectives -start from known to unknown		3-6MIN
Body/Lesson Development -In steps -Teacher/Learner activities -Teaching methods -Effective use of aids-at the right time -Proper time estimate		Bulk of the time
Summary: Teacher and learners to go over the lesson through question and answer method (feedback needed). Assignment: Students to do exercise 5 No. 2 from Theory of catering by Kinton page 14.		5MIN
REMARKS –How effectively lesson was covered Remark soon after vteaching.	TOTAL TIME	IN MINUTES

2. He/or she can then anticipate learning difficulties and decide how to overcome them.

3. The lesson plan helps in the organization of tools, materials

and aids necessary for effective teaching and learning.

4. The lesson plan gives the instructor confidence while teaching and helps to: -

- Provide needed motivation
- Give proper emphasis where/when it is needed
- Ensure that all essential information is included.
- Provide for the use of instructional aids
- Insert questions at the proper time
- Stay on schedule.

SAMPLE LESSON PLAN				
NAME: <i>Ms Juma</i>	LEVEL <i>FORM 1</i>	No. of students <i>21</i>	DATE <i>16/2/05</i>	TIME <i>2-2:40PM</i>
INSTITUTION: <i>Mwanainchi Girls High sch.</i>	CLASS <i>FORM 1 W</i>		SUBJECT <i>Home science</i>	
LESSON TITLE: PERSONAL HYGIENE			WEEK <i>4</i>	
SPECIFIC OBJECTIVES By the end of the lesson the learners should be able to:- a) Define the term personal hygiene. b) Explain 5 factors to consider in personal hygiene. c) Explain at least 4 characteristics of hygienic kitchen clothes				
<u>T/AIDS</u> - Video on personal hygiene. - sample of hygienic kitchen clothes				
REFERENCES 1.Theory of catering 2 nd edition by S. Kinton page 13-16 2. Form 1 KIE Home science page 40-43			TIME ESTIMATE IN MINUTES	
PRESENTATION: Introduction Teacher to; <ul style="list-style-type: none">• take roll call• review previous lesson• introduce the days lesson and write the title on the board			5min	
Body/Lesson Development Step 1. Through question and answer method the teacher and the learners to define personal hygiene. Step 2. Through question and answer method the teacher and the learners to explain factors to consider in personal hygiene. Step 3. The teacher and the learners to explain characteristics of hygienic kitchen clothes. -The teacher to show the learners the hygienic kitchen clothes			5min 10min 15MIN	

Summary Teacher and learners to go over the lesson through question and answer method. -Learners to watch the video show on personal hygiene. Assignment: Students to do exercise 5 No. 2 from Theory of catering by Kinton page 14.		5 MINS
REMARKS	TOTAL TIME	40 MINS



ACTIVITY

Using the sample lesson plan given, prepare a lesson plan for a theory lesson in your subject area. Assume you have a 40 minute lesson and 27 students. You may refer to the single lesson earlier schemed. (Lesson plan format is at the back of this manual).

TOPIC FIVE MOTIVATION

LEARNING OUTCOMES

By the end of this topic, the learner should be able to;

- Understand psychological explanations of motivation.
- Know the different types of motivation.
- Understand motivational influences.
- Understand the principles of motivation.
- Apply motivation in the classroom.

What is motivation?

Motivation is a degree of desire or drive for attaining specific objectives. It may be described as a personal internal process that determines the strength and direction of a person's behavior or line of action e.g. you feel thirsty and you stand up to look for water.

In the classroom situation, motivation refers to a set of devices that help keep learners alert and direct their attention to the set objectives. The teacher's role in this case is to attempt to create in learners a desire or drive for attaining the set objectives.

EXPLANATION OF MOTIVATION;**1. Psychological explanation**

According to psychology, everyone is continually striving either to achieve leisure or to avoid pain.

Drive reduction and self-actualization are some of the psychological foundations that help to explain the process of motivation.

2. Drive reduction

Drive refers to the force (motive), which compels one to do something. When a need exists within an individual, it gives rise to a drive, which compels him to act. The individual learns to pursue some goals instead of others which leads to their attainment hence reducing one's drive and satisfying the related need. i.e. the need for food leads to a hunger drive. This hunger drive is reduced by an appetizing meal. Therefore, drive reduction is the force behind the

attainment of primary and secondary needs.

3. Self-actualization

This is the opposite of drive reduction. A self-actualizing person after satisfying his physiological and psychological needs strives towards fulfilling his potential as an individual.

Self-actualization is the maximum development of one's potential as an individual. This may and should become one's dominant motive.

BIOLOGICAL/PSYCHOLOGICAL THEORIES OF MOTIVATION

1. Instinct theory

This theory believes that each individual has automatic responses which do not have to be learned.

However, man has a modification factor and a fixed number of instincts, which act as a driving force behind behavior and character.

2. Basic needs theory

There are the primary needs such as the need for water, food, clothing & shelter, which are strictly essential for survival. The lack of these needs leads to a drive for attaining them.

3. Adaptation to environment theory

Motivation comes from a need for an individual to strive to adjust himself to his environment or adjust his environment to his needs.

4. Unconscious mind theory

This theory believes that the desire for pleasure and shrinking from pain is the original motivating force.

5. Tension theory

This is based on tension, which is set up when our desires are frustrated and satisfaction when they are fulfilled. Therefore motivation may be defined as a desire to reduce frustration and obtain satisfaction.

6. Objective theory

Humans act as they do because they set up certain objectives/goals/drives/ideals/aspiration levels. Failure to attain these objectives results in frustration, which in itself is a source of motivation.

The teacher's problem is how to use motivation in the learning

Written by jnbaraza

Ed Dept Lecture series 2007

process or how to stimulate new forms of motivation where none seems to exist. This is very crucial because where there is no motivation; there will be no learning.

ELEMENTS OF MOTIVATION

Motivation consists of 3 elements;

- (i) An energy change which takes place in the neuro-physiological system of the individual i.e. learner.
- (ii) Feelings i.e. psychological tensions about a goal that the learner intends to achieve.
- (iii) The learner then makes those responses that will lead him to the goal.

TYPES/SOURCES OF MOTIVATION

There are 2 types or sources of motivation.

1. Extrinsic/external motivation;

These are forces that exist outside the learner and tend to drive him to a given course of action. They are physical circumstances and the desire of others i.e. rewards, praises, rebukes and parental ambitious. An externally motivated person lives on fate i.e. believes in luck (good/bad). He easily looks for ways of justifying his failure.

2. Intrinsic/internal motivation;

This is aroused by an inner urge, drive or motive. These are forces that originate from within the individual to impel (force) him to seek a given goal. Such forces include attitudes, needs and anxiety i.e. an interest in music and the fear of failing exams motivates certain behavior. For such individuals, their main reward is their own satisfaction in the task.



ACTIVITY

Which type of motivation do you think is more influential for effective learning?

MOTIVATIONAL INFLUENCE – WHAT MOTIVATES US?

i. Interest as motivator

Motivation is closely related with experiences, abilities and needs of the individual. A learner may respond to a given learning situation so long as it is compatible with his interests.

ii. Immediate goals as motivator

Motivation is enhanced when learners are able to relate to immediate goals than to **remote/long term** but meaningful goals. Immediate goals are viewed as easily attainable and serve as a greater incentive than remote goals. Thus a goal that a student views as unattainable hinders motivation. Therefore, a learner must be able to regard as attainable any educational objective, immediate or long term that he is supposed to achieve.

iii. Environment as motivator

Every individual views all environmental factors in terms of their effect on his personal welfare. This refers to all curriculum and instructional related situations as well as to the actual physical environment. The environment of each learner is composed of a wide range of stimuli, all of which compete for attention. The learner selects those stimuli that he perceives to be most closely related to his individual wants.

iv. Success as a motivator

Learners are motivated if a proper balance between successful and unsuccessful experiences can be maintained. The teacher's responsibility is to assist the learner in achieving success. The experience of success usually provides highest motivation for slow, average and fast learners alike. Confident learners look forward to success and the learner who consistently experiences success approaches new tasks with confidence. Therefore, successful experiences are clearly related to motivation and goal achievements.



ACTIVITY

As an individual, which one is your greatest motivator?

PRINCIPLES RELATED TO MOTIVATION

Proper use of motivation to promote learning calls for knowledge of individual differences. The following principles related to motivation will be of great use to a teacher who intends to motivate his learners.

1. All behavior except that governed by automatic nervous system is motivated.
2. The mind may be elated (aroused) by an external force, but it is the learners reaction to the stimuli that results in learning.
3. Motivation is best viewed as a tool to assist instruction and not as an end in itself. It's a means to an end.
4. Each individual views environmental factors in terms of their assumed effect on his welfare.
5. Since each learner sees only what he experiences, his motivation will result partly from what he sees in a particular situation.
6. Interest motivates learners and in its absence, learning does not take place.
7. Learning that bring reward and satisfaction to the student acts as a motivation for further learning.
8. The learners' level of aspiration is a result of experience from which he develops a concept of what he will be able to do.

GUIDELINES FOR THE EFFECTIVE USE OF MOTIVATION;

1. Identify, through experimentation the incentives that motivate different learners in your class.

2. Help learners identify the personal value that specific academic goals will have for them; this will help them establish realistic and sound goals for themselves.
3. Be aware of the motivational effects of grades as a basis for motivation. Keep learners informed about their academic progress through continuous assessment tests.
4. Provide learners with a sound balance between successful and unsuccessful experiences. Arrange for successful experiences that will build their self-expectations and help them achieve good grades where possible.
5. Maintain a desirable balance between approval and disapproval, which helps bring about optimum learners motivation. Constructive criticism is preferable to a negative one when dealing with learners. But occasionally, negative criticism is better than none.
6. Find means for establishing and maintaining rapport with learners. Help individual students to manage their tensions and emotions through counseling.
7. Make your lessons meaningful so that learners will be stimulated.
8. Surround learner s **with stimulus** that will make course content more interesting and desirable.
9. Teach your subject so well that learners will develop a liking for it and for all that is related to it.
10. Since primitive motivators such **as pain, fear and hunger** do not operate at intense level in the classroom, there is need for activity so learners will be motivated to do things with their hands.
11. Curiosity, exploration and discovery are strong motivating force which can be achieved by exposing learners to complex tasks.
12. Learners have achievement needs, which should be capitalized on as motivating factors. This may be achieved by promoting a feeling of initiative and self-responsibility. However, it should not be over emphasized, as learners may feel too self-satisfied.
13. Competition among learners raises the level of motivation so create a competitive atmosphere in your class.

NOTE;

1. Remember, all behavior is motivated.
2. Don't assume that each learner will accept the stated goal of class as his own personal goal.
3. Don't assume that one kind of incentive will motivate all students.
4. Don't use rewards and punishments unless you are sure they will serve as desirable motivators.
5. Don't emphasize a failing aspect of a student's performance even though he is academically weak or limited in capacity.
6. **Don't confuse educationally justified interesting activities with entertainment.**

WAYS OF SUSTAINING INTEREST IN THE CLASSROOM.

1. Focusing;

Failure to concentrate on a single aspect of a task is one of the characteristics of under/lo achievers. To many of them, the learned things are viewed as trivial. To keep such learners to the right track, the teacher uses motivation to get them to attend to classroom activities. This can be by cajoling or coaxing, threatening, cracking jokes, or making the lesson interesting.

2. Stimulus variation;

Most students have short attention spans so a good teacher should vary the learning activities so that the learners receive the stimuli that will keep them interested. Some behavior patterns that vary the stimulus and keep learners attention are;

(a) Gestures;

Head, hand, body and eye movements are important in oral communication. Oral communication alone does not convey meaning as effectively as it does when combined with gestures.

(b) Interaction styles:

A teacher normally uses 3 interaction styles in the classroom.

- (i) Teacher – class i.e. lecturing
- (ii) Teacher – student i.e. questioning
- (iii) Student – student i.e. redirect students question to another student.

Deliberate varying of these interaction styles varies the context

within which material is presented thereby increasing attention.

(c) *Pauses;*

When pauses are deliberately inserted into a presentation the following happens;

- (i) The content is broken into more absorbable units.
- (ii) Learners often become more attentive as silence acts as anew stimulus.
- (iii) Since the stimulus lacks structure, learners may strain for cues and direction.
- (iv) A distinct pause prepares learners for the teacher's next statement.

(d) *Shifting sensory channels.*

When the teacher shifts from one communication mode to another, the learners also have to switch their "primary receptors" which normally leads to a higher level of attention.

(e) *Movement*

Teacher's movements require student visual and aural sensory adjustment, which in turn increases the attention levels. But too much of it disrupts thinking.

3. Set induction;

The initial instructional move of the teacher should focus attention of learners on some familiar experiences so as to provide a link between the familiar or known to the unfamiliar or new. This encourages learners' interest and involvement in the lesson.

4. Questioning

The teacher should employ **various probing** techniques when asking questions in order to get **fuller student responses**, which in turn sustains attention and interest of the learners.

5. Reinforcement

A student's response to a question calls for reinforcement whether the answer is correct or wrong. Reinforcement, more so, positive reinforcement increases student participation.

GUIDELINES TO EFFECTIVE CLASSROOM MANAGEMENT

It is clear that effective teachers are not those who are able to deal with problematic students or situations at school, but those who are able to prevent problems before they occur.

The following may be adopted by the teacher for greater class management and effectiveness

- ❖ Make learning interesting by;
 - Varying approaches to teaching
 - Presenting meaningful content
 - Using of teaching Aids
- ❖ Make use of reinforcement, as it strengthens responses or behavior.
It is better to promote good conduct than use punishment, censorship or blame
- ❖ Avoid punishing a group if you know who did wrong
- ❖ Avoid the use of sarcasm, and do not ridicule students
- ❖ Acknowledge or appreciate the good deeds of your students
- ❖ Work with students, not against them
- ❖ Appreciate individual differences among students
- ❖ Always try to establish the root cause of misconduct
- ❖ Encourage participative learning
- ❖ Provide corrective feedback
- ❖ Develop a conducive learning environment
- ❖ Know your stuff
- ❖ Encourage positive self concept among learners
- ❖ Set realistic goals and objectives
- ❖ Prevent problems before they occur
- ❖ Avoid confrontational behavior
- ❖ Apply the principles of motivation, such as;
 - ⇒ setting realistic goals
 - ⇒ Observing equity and being impartial.

⇒ Considering needs of the learners.

TEACHER STUDENT RELATIONSHIP

For effective learning to take place, it is important for both the teacher and the student to develop a relationship that allows proper interaction and communication. The teacher should;

- Establish credibility with students and gain their respect.
- Be an individual, not an impersonal authority figure.
- Respect students as individuals.
- Not however be overdramatic or particularly affectionate.
- Show genuine concern. This should be evident in the tone of voice, facial expression, and every day behavior.

How should the teacher show concern?

- Get to know each learner; this will help you to establish their needs and interests
- Be friendly, but not intimate with students
- Provide guidance, do not be controlling or manipulative
- Communicate, but stick to official issues
- Avoid intimate relations with learners.
- Do not discuss colleagues with students, and if a student confides in you, avoid discussing them with colleagues.
- Take your work seriously and take responsibility.

The teacher-student roles

From a management point of view, roles are important as they shape behavior. When roles are clear, objectives of an organization are easily achieved as each individual does his/her part.

The different roles of the teacher and student are outlined here below:-

The teacher

- ⇒ Facilitator
- ⇒ Guider
- ⇒ Sets goals and make them clear
- ⇒ Teacher

The student

- ⇒ Active participant
- ⇒ Sets goals and works at their accomplishment.
- ⇒ Takes responsibility



ACTIVITY

Discuss how you can effectively manage your class for effective teaching/ learning.

TOPIC SIX COURSE WORK EVALUATION

LEARNING OUTCOMES

By the end of this topic, the learner should be able to;

- Understand the meaning of evaluation.
- Know how to prepare for examinations.
- Know how to administer examinations.
- Understand the purposes of examinations.

Evaluation involves all process by which the value of something is ascertained. In Education, it refers to the process by which we find out how the set objectives are being achieved or realized by the end of a programme.

As part of his planning, a teacher should decide on;

- an assessment strategy for the course as a whole and
- an appropriate way of assessing learners on each lesson within this overall strategy.

All kinds of examinations, whether Continuous Assessment Tests or End year examinations must be clearly indicated in the scheme of

work. The teacher should also ensure proper preparation and setting of examinations to ensure that there is no repetition. The period of the examination and the length of the examination to be taken must be known.

ADMINISTRATION OF EXAMINATIONS

Preparation before the examinations:

- Inform the learners about the examination, when it will be done and what topics it will be covering.
- Inform learners in advance about materials or equipment they will need for the examination especially if they are to provide them themselves.
- Incase the examination will take more than the class time; inform the affected teachers in advance.
- Prepare the examination, the marking scheme, the table of specification, the scheme of work and lesson plan for the test.
- Ensure that you have all the necessary materials i.e. writing materials, calculators etc.
- Ensure that the room is free of any materials that could induce cheating i.e. charts, books etc.
- Ensure that the room is clean, well lit and properly ventilated.
- Rearrange the seats so that there is enough space between students.
- Incase you'll need assistance i.e. distribution and supervision inform those concerned in advance.

Execution of the examination

- All the necessary materials of the exam should be placed on the desk.
- Place a clock where everybody can be able to see.
- Distribute the question papers and answer sheets upside down to all students.
- Take roll call so as to know who is going to miss the examination.
- Emphasize instructions for the examination and make any corrections to the question paper on the board as all learners watch.
- For individual questions, move to individual students and assist them without interfering with other students or

- disclosing the answer to the questions.
- Signal the learners to start writing the examination, remind them how long the paper will take and therefore when they'll be expected to stop writing.
 - Announce remaining time at reasonable intervals.
 - Supervise students as they write examination to ensure that no cheating takes place.
 - Announce the last 5 minutes and signal them to stop writing when time is up.
 - Indicate order of collecting the sheets.

Summary of the examinations:

- Collect answer sheets from all students following the order given.
- No one should leave the examination room until the lesson is concluded.
- Ask students about the examination so that you get a general feel of how it was – ask a fast and a slow learner.
- Tell students about when the next lesson will be then dismiss them.
- Mark the scripts following the marking scheme but consider other answer not in your scheme but which are satisfactory.
- Do not mark the examination while you are bored.
- Do not indicate correct answers on the script.
- Return scripts to learners and do necessary revision.

PURPOSES OF COURSEWORK EVALUATION/EXAMINATIONS

- The role of evaluation in the classroom is two fold. First as a feedback to teachers, parents and learners. This assists them to discover weaknesses, inadequate coverage and so on. This is obtained through formative evaluation which is normally carried out in form of quizzes, reports, tests and assignments. However summative evaluation which is realized through final examinations is equally useful as it describes a learner's level of achievement and is often used as:
 - Stimulant/motivator for both the teacher and the learners.
 - A criterion for school or college selection.
 - A criterion in job placement.

- A basis for promotion to the next grade or level.



ACTIVITY

Discuss the role of evaluation in the teaching/ learning process.

TOPIC SEVEN TEACHING METHODS

LEARNING OUTCOMES

By the end of this topic the learner should be able to;

- Choose appropriate teaching methods for a particular lesson.
- Use a chosen method appropriately to teach a lesson.

INTRODUCTION

There are various techniques of teaching that can be employed by a teacher. The choice and use of these techniques should be carefully considered.

The techniques are discussed under the following headings:

- definition
- types
- appropriate situations when to use the method
- inappropriate situations

- preparation
- presentation
- advantages
- disadvantages
- how to improve the method.

NOTE

This section will be tackled through group discussions and presentations. The notes are just a guide for the teacher.

1. GROUP ASSIGNMENT

Assignment: This is where students are given work to do after school hours. It is related to what they have already done or what they are yet to do.

It is also defined as a set of tasks or a specific task which are expected to complete in a given time. It may be a project, a series of problems to be solved or some questions to be answered.

Assignments could be given to a group of learners depending on the type of tasks and time available for learners to complete the tasks. Group assignments may be given to smaller groups or to the whole class.

Assignments may be given daily either as a follow-up activity after the development of a lesson or as a preparatory exercise to help build the perceptive basis for new lessons.

They can also be given on a longer term basis, i.e. larger units of work can be given for completing over a longer period.

The rationale of group work/assignment

- It initiates and encourages co-operative action. Successful co operative action depends upon a variety of skills on the part of participating individuals. Such skills are learnt through practice. For example in school, subjects like social studies can provide situations which are suited for practice in the application of group work skills.
- It is used to deal with individual differences in class according to their level of performance in a skill.
- It helps learners to learn more effectively than they would if the class were always taught as a unit with everyone being taught the same thing at the same time. This is achieved by the teacher organizing work for each group separately, considering the fact that some students may be weak at performing one skill and yet good at another.
- To serves as a follow-up activity to what has already been learnt in the classroom.
- Group work/ assignment provide an excellent opportunity for reinforcing previously learnt skills or knowledge.
- To prepare learners for the next lesson. Assignments can be designed to give them background information and knowledge about lessons to come. This can help establish the appreciative basis for new learning experiences as well as develop proper attitude.
- To provide direction and guidance for independent study. Very few secondary school learners are able to develop the skill of studying on their own. Assignments can provide a direct and deliberate means of teaching the skills of independent study. Given enough practice students will be able to learn effectively on their own, without having to rely on their teacher's direction all the time.

- To develop a positive attitude towards extra work and good study habits. Stimulating and challenging assignments help create a favorable attitude towards learning activities inside and outside the classroom. Learners are motivated to do better in each succeeding assignments.
- To provide an excellent means for developing a higher order of mental processes. One of the criticisms of our education system today is that most of the normal classroom activities are directed towards more acquisition of facts and information. Thus there is no provision for the development of thinking and reasoning abilities. The assignment can offer an excellent opportunity for the use of judgment and reasoning.

NOTE: The teacher should ensure that the kind of groupings he adopts should neither be permanent nor applicable to all subjects. Therefore the groups should be changed as often as is necessary to avoid the tendency of the learners identifying themselves with one particular group.

PREPARATION

Before giving group-work the teacher should observe the following:

1. Assessing how much group work has been done by learners during previous school work.
2. Determining what possibilities for group work are available within the curriculum.
3. Identifying the skills needed by the group in accomplishing its assignment.
4. Reviewing the basic procedures for group work with the learners.
5. Helping the learners identify the topics or problems to be explored.
6. Providing guidance to the learners as they organize into groups and selected leaders.
7. Serving as a resource to the groups as they make initial plans and survey available resources.

8. Judging whether or not the plans made by the learners are within their range of abilities.
9. Supervising carefully the learners' activities, so that assistance is available when needed.
10. Hiding frustrations when poor learners are selected as leaders.
11. Helping learners recognize the qualities of leadership needed for effective group work.

PRESENTATION

The teacher should assist learners in the following ways;

- Closing out activities tactfully if progress is not proceeding in a positive direction.
- Assisting the learners in analyzing and drawing conclusions from their findings.
- Assisting the learners in selecting a member for presenting their answers to other learners.
- Assisting the group in evaluating the effectiveness of their efforts.

ADVANTAGES OF THE GROUP WORK METHOD

1. The strategy is conducive to developing learner's leadership and discussion skills.
2. It allows learners to use inquiry skills that many educators believe will better prepare learners for the future by removing traditional teaching learning strategies.
3. It provides opportunities for more intensive investigation of a study or problem.
4. It allows learners to become more actively involved in their own learning and to participate more freely in discussions.
5. It provides opportunities to develop respect for other learners whose work helps the group progress in reaching its goals.

6. It enables the teacher to give more individual attention to each learner's learning needs.
7. It can be used in schools employing a variety of class arrangements, groupings and schedules.
8. It encourages social interaction among learners.
9. It helps a teacher to plan how to assist pupils with special learning problems.
10. It enhances learner– teacher relationship.
11. It makes it easy to assess the progress of the individual learner in learning skills.

DISADVANTAGES OF GROUP WORK METHOD

1. It often involves only the able learners because these learners are capable of directing their own learning.
2. It sometimes requires different seating arrangements, different kinds of materials and different kinds of teaching styles.
3. The classroom settings does not always provide the best physical environment for small group study, the close proximity of groups to each other or to learners studying independently can make for much interference.
4. The success of the method depends on the ability of learners to lead groups or to work independently.
5. It requires careful planning, abundant learning material, and plenty of room.
6. Sometimes a teacher may be unable to attend to all groups' needs adequately. If this happens, the group becomes idle and unruly.
7. If the teacher does not organize and motivate learners they may develop a negative attitude towards learning certain skills.

HOW TO MAKE GROUP WORK EFFECTIVE

Much of the failure or reluctance of students to complete assigned tasks may be attributed to badly conceived assignments. This can be avoided by observing the following;

1. The number of groups in a class should not exceed four. This is because more groups tend to become unmanageable.
2. Assign each group a particular place in the room.
3. Ensure that learners can sit comfortably, facing each other.

4. Give each group a name and let every learner knows their group by name.
5. Give a time frame in which the assignment must be completed and handed in for marking.
6. Mark the assignment and provide learners with feedback.

The teacher's time should be distributed according to the needs of individual groups. A group of slow learners will need more time than a group of quick learners. It is for the teacher to know how much time to be allocated to each group.

The following points should also be noted:-

- Do not neglect any group.
- Give work according to the level or ability of the learners. No two groups should be given the same kind of work at the same level of difficulty.
- Allow the learners plenty of time to work alone. Give them enough work to keep them busy.
- Move a learner from one group to another as soon as you notice no progress being made.

This group work method, however, requires an observable pattern of behavior on the part of the teacher, in order to help the learners accomplish the objectives of their work within a group.

KINDS OF GROUPINGS

1. Ability grouping
2. Mixed or non-ability grouping
3. Social or natural grouping
4. Interest grouping
5. Sex grouping
6. Need grouping
7. Random grouping

Ability grouping

This means putting learners who seem to be more advanced (in expressing themselves while answering questions) in one group say

group “A”. The learners who are least advanced in say group ‘D’ and the average pupils in group ‘B’ and ‘C’.

This allows learners in any one group being of much the same standard. The teacher should never call the learners A, B, C, D but should choose or allow the learners to choose their own names, by using birds, animals, colors, countries etc.

Advantages

1. A learner creates confidence in him/her self to the other learners as long as they are of the same standards such that he can’t be left behind.
2. Ability grouping gives stimulation and encouragement to each learner.
3. The quick learners may learn as fast as they are able while the slower learners get special instructions and help at their own level and pace, and do not have to compete unfairly with quick learners.

Disadvantages

1. Once the learners discover the meaning of these kinds of grouping those in lower groups, for example ‘D’ group become discouraged and ashamed, and those in upper groups for example ‘A’ group, become proud.
2. Parents of learners in lower groups, say ‘D’ group, blame teachers and think wrongly that the teacher ignores them.
3. Sometimes slow learners are also problem learners and they may become a great – problem if they are all in the same group.
4. There can be no academic competition within the class as a whole but only within the groups.
5. This kind of grouping is unnatural. It is important in the social training of children that they learn to understand and get along with those who are different from themselves.
6. If the dull learners are left together all day they will become duller.

Mixed or non-ability grouping

This is where each group is made up of learners of varying levels of intelligence. This type of grouping is used for many subjects for example writing, oral language, history, geography, etc.

Advantages

1. It ensures an equal distribution of learning and response over the whole class.
2. The quick learners in each group help the others and encourage them to try to be as good as they are. This is because many learners learn more easily from each other than from the teacher.
3. It ensures an equal opportunity of being the 'best' group when there is inter-group competition.
4. It boosts the morale of the average and weak learners to be grouped with the clever learners.
5. Shy and timid learners gain courage from sitting beside those who are confident and happy.

Disadvantages

1. It cannot be used in all subjects for example reading and mathematics because slower learners may give up trying altogether.
2. The intelligent learners may be frustrated if the pace of learning is too slow for them.

Social or natural grouping

This is a grouping where learners are free to sit whenever they like in the classroom, can be beside a friend or in a favorite place. It is used during religious education and story-telling

Advantages:

1. It helps to adjust when seated besides a friend or at a favorite place and learning takes place easily.
2. Sometimes learners work better if they are allowed to sit beside someone they know and with whom they can discuss their work.

Disadvantages

1. When friends sit together they are inclined to chat and this may disrupt the class.
2. This does not prepare learners socially for life.

Interest grouping

This is where learners who are interested in a certain topic or activity may be grouped together just while that activity is in progress. Their common interest should lead to sharing of ideas

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and goal social interaction while they are working for example, at an Art lesson, learners interested in modeling might model, while others might choose painting, others construction etc.

Advantages

1. When learners are interested in what they are doing, they tend to learn well, what a learner wants to do, he will do well.
2. Not all learners like the same activities.
3. A learner will get an opportunity of developing a special talent.

Disadvantages

1. Some learners choose their friends rather than a subject or activity.
2. Some groups may be very large and some very small.
3. Timid learners may be afraid to volunteer for any new and challenging activity.

Sex grouping

This is grouping according to sex that is, having groups for males and females:

Advantages

1. Girls have interests and abilities which in many instances are quite different from those of boys.
2. Special training can be given to separate groups of boys and girls to prepare them for their adult roles in life.

Disadvantages

1. Sometimes boys and girls are separated from learning together when they could learn better if they were together.
2. Some teachers do not think that certain skills (like cookery) should be taught to both boys and girls up to a certain level.
3. At certain levels for example lower primary, if pupils are separated, they often try to 'show off' to each other, playing tricks when they should be working.

Need grouping

This is where a teacher may discover in his class a group with a common difficulty. They are put in a special group. The remainder of the learners in the class is given suitable work to do while the

teacher deals with the group with special need.

Random grouping

This is where students are chosen in a haphazard way to form groups. There is no criterion used.

2. INDIVIDUAL ASSIGNMENT

This is an educational activity carried out by an individual seeking self improvement. It is usually but not always self initiated. It focuses on the type of planned study done by an individual under the guidance of a teacher. It involves identification of the problem, topic or project and moves the learners through a process concluding with an evaluative activity that pulls together the learning gained from the study.

This type of study can take place in any school setting and does not require special equipment or personnel. It can be the major means of learning in a comprehensive program where the facilities are designed and personnel are selected and trained to work with the learners in independent study programmes.

This method may be limited to acquisition of understanding through seeking the answers to problems posed by teachers or it may involve self directed learning that is separate from course requirements. Thus, the ultimate goal of education, which is to shift the individual to the burden of pursuing his own education, can be achieved through this method. There is evidence that learners of all ages and of a wide range of abilities can achieve the goals as well as and in many cases better than learners in classrooms where instructional strategy is used. Thus provided the assignments are well planned and drawn up according to the age, interests, aptitudes and intelligence of the learners, the method can be quite effective.

TYPES OF ASSIGNMENTS

- Home assignments-done after class.
- School assignments-done in classroom during class

PREPARATION

When planning, the teacher should observe the following;

1. Identifying through interviews, inventories and tests the individual interests and abilities of the students that might be used in planning independent study activities.
2. Locating the materials and experiences that correspond to the needs, interests and abilities.
3. Planning with each student how he will proceed with the independent study activities.
4. Helping learners to assess their individual study skills, for example note taking, outlining, using resources other than printed ones, preparing reports both oral and written.
5. Allowing an appropriate amount of time for the student to engage in the individual work.
6. Providing help and encouragement as may be indicated by student need.
7. Helping learners to evaluate their progress toward the agreed-on objectives of the study.
8. Conducting group discussions of those involved in independent study, for the purpose of sharing their experiences during the study as well as at its completion.
9. Evaluating with the students the final results of their studies.
10. Assessing with the learners what they have learned from the study that might assist him in selecting and conducting future independent studies, for example, use of new resources, development of new study skills.

PRESENTATION:

1. Individual assignments may be given in form of questions related to the topic under study.
2. Enough time should be given to individual learners to complete the work.
3. The teacher either collects, or goes to each learner and marks his work during class lesson.
4. The teacher awards marks according to individual performance.

RATIONALE OF INDIVIDUAL ASSIGNMENT

1. It is used to prepare learners for the next lesson.
2. It is used to make an individual learner develop ability to solve tasks on his own.
3. It enables the teacher to assess the individual's ability and take appropriate actions to improve the performance.

ADVANTAGES

1. It allows the learners to pursue his topic with as much depth as he wishes and to be as creative as his talents permit.
2. It may be carried out in any school regardless of the organization of the staff.
3. The strategy does not normally require additional equipment.
4. It is appropriate for all areas of the curriculum.
5. It enhances a learner's motivation, because he is involved in selecting what he plans to study.
6. It helps bridge the gap between the school and the community because it can occur in a variety of settings.
7. It allows learners to pursue individual interests within the required curriculum as well as to supplement the curriculum.
8. It emphasizes the learners' responsibility and accountability; which contributes to personal involvement and self-discipline.
9. It allows learners to develop knowledge and skills that cannot be obtained as well in a regular classroom setting.

DISADVANTAGES

1. There is little social interaction unless planned for.
2. The strategy is difficult for learners to handle effectively if they have been used to conforming and competing in group settings only.
3. It is viewed to be ineffective by parents, teachers and administrators, who believe that group activities provide the best setting for learning.
4. It arouses concern of some parents and learners over whether

- or not learners are learning what they should for promotion to the next grade or for college entrance requirements.
5. It requires a low teacher learner ratio for adequate planning, counseling and supervision.
 6. It can be expensive when used on a comprehensive basis in a school, because it may require adjustments in the use of space, personnel, and materials. Some educators believe that a comprehensive program for independent study requires five types of facilities; study and work centers for each subject field, a library, a conference area, relaxation space and an intensive care area for learners who are not yet able to assume responsibility for their own learning.
 7. It requires additional adult supervision, which may be difficult to arrange.
 8. The method can be uncomfortable for some teachers because it requires a different type of relationship between a learner and teacher. In this case a teacher is to help the student to become more independent in his learning activities rather than being the major source of the students' knowledge.
 9. The strategy could have an undesirable effect on a learner's thinking and attitude. A learner may find his independent study more interesting that he thinks he should quit school and pursue the new interest which excites him more.
 10. It requires a teacher's willingness to do extra work.
 11. It is a slower process thus heavy curriculum may not be completed in time.
 12. Weaker learners may copy answers from bright ones.
 13. Mostly suitable for higher levels of learning.

HOW TO IMPROVE THE METHOD

- Success depends solely on well planned assignments by the teacher.
- Consider learners interests, and demands of the subject.
- Assignments should be challenging so as enthuse learners, stimulate their thinking and enable them to explore and

experiment.

- Learners should not be allowed to move to new assignments if they haven't finished the first ones.
- Learners should be discouraged from copying.

3. PROJECT METHOD

A **project** is a teaching method which stresses the need for learners to *interact* freely with their surrounding environment to glean the rich education that abounds it, preferably working in groups.

It can be defined in various ways;

- An American known as John Dewey defined project as the co-operation study of real life situation(s) by a learner, a class or the whole school, usually under the expert guidance of a teacher.
- It is a unit of activity carried out by learners in a natural life-like manner and in a spirit of purpose to accomplish a definite attractive and seemingly attainable goal.

The project is essentially a learning unit and is carried out or designed by learners under the guidance of a teacher. This method of teaching is one of the most effective ways of arousing interest of learners.

It allows the learners more freedom to investigate and gather data and in some ways resembles other methods of teaching. It has a strong element of discovery, training and learning by ways of motivating learners who will enjoy finding things out for themselves. The method is essential as it develops a learner centered learning situation.

APPROPRIATE SITUATIONS

Project method is one in which practical skills are involved. The most appropriate situations for using it as a method of teaching are:

-

1. To teach practical subjects for example home science, Agriculture and Industrial subjects.
2. In social studies e.g. in writing a history of a local community and writing an account of the development of a school.
3. In Science subjects e.g. studying ways of improving health in the school and local community.
4. When there is need to arouse learners interests e.g. when trying out new idea.
5. When learners are to acquire desirable skills, understanding and attitudes relevant to their developmental needs e.g. where learners are supposed to design a workshop which is to be used by an approximate number of learners. When learners are needed to discover much more on certain areas.
6. When staging a play for school, organizing parties, competitions.
7. When nature of work requires precision but not just information
8. Projects can be applied in theory subjects e.g. research and report writing.
9. As a course requirement.

INAPPROPRIATE SITUATIONS

1. When the project to be undertaken is too expensive.
2. When the level of learners does not measure to the level of the project i.e. too complicated a project.
3. When the learners are too young to bring or put together the necessary pieces of information.
4. When the project does not meet the learners needs, i.e. if it offers too little as compared to time and money involved in it.
5. When attempting to cover a lot of work a project is not appropriate.

6. When introducing a new topic, unit or course.
7. When there is limited time to carry out the project. In this case other methods may be employed.

PREPARATION /PLANNING THE PROJECT

The education value of this method depends upon the manner in which learners are guided in ensuring intelligent responsibility for their own learning activities. The following points should be considered when planning.

1. Selecting the Project: - before attempting to select a project, it may be necessary for the teacher to consider his own capability i.e. his own knowledge on the subject in order to guide the learners well.
2. It is also necessary to make the learners aware of what a project is, what it entails, as some may not have undertaken a project before.
3. A list of feasible project goals can be drawn by the class, individuals or groups of learners. This will make sure the project meets the learners' level of ability. Do not set too high objectives that may not be attainable.
4. Individual or groups of learners can select their own project or if the class prefers they can all work on the project.
5. The teacher should help learners select goals that are practical in view of the time and facilities available.
6. Consider books of reference or any reference material that will be used during the project.

PRESENTATION

1. Learners of higher levels may be able to progress without constant supervision but younger ones need close supervision.
2. Those who have never taken part may be confused and need help thus consider the following when presenting.
 - (a) Discuss the project with the class to arouse interest.
 - (b) Assign work to each individual or groups.
 - (c) Give necessary instructions
 - (d) Distribute necessary materials.
 - (e) Guide and help learners when need arises
 - (f) Show interest in their work by asking thought provoking

questions.

- (g) Evaluate their work as they proceed.
- (h) Evaluate each group work as they proceed with the project by discussion and general summing up.
- (i) Grade each group work i.e. correct each group work.
- (j) Condense work into book form.
- (k) After completion of the project the teacher and learners should assess together the successes of the project and modify if necessary, i.e. were the resources and materials adequate? Was there sufficient time? Was project worth the time expended on it?

ADVANTAGES OF PROJECT

1. It applies to the principles of learning by doing.
2. All learners have the same and equal facilities, materials practically.
3. Encourages creativity, freedom of expression, co-operation, initiative and eliminates selfishness.
4. Learners work towards common goals in project.
5. It gives experience in planning and organizing.
6. Provides a natural approach to learning
7. Exposes learners to real life experiences.
8. Gives learners confidence.
9. It is a learner centered method.

DISADVANTAGES

1. During project activities order and discipline are somewhat difficult to maintain.
2. It might lead to evaluation problems since not all learners perform equally.
3. There is no certainty that all learners will comprehend i.e. there is a possibility that some learners are impossible- cannot get what the project is all about therefore will not participate fully.
4. It is difficult to choose topics of interest for all learners.
5. The expense, effort and time given to complete project sometimes is not justifiable in terms of what is learnt.
6. There are sometimes problems in planning projects.
7. Encourages laziness among some learners who waste time.



ACTIVITY

Discuss ways of improving the project method of instruction.

4. LECTURE METHOD

The word “Lecture” is derived from a latin word lego (legere, lectuc) which means, “to read”. Later the lego became generalized to mean “to teach”.

A lecture: can be defined as a talk by a teacher for the purpose of giving information or transferring knowledge.

Method: is a way of transferring information. Therefore lecture method can be defined as the process of transmitting verbally/orally a body of knowledge, according to the planned scheme.

Lecturing is a teaching method in which facts or principles are presented orally to a group of students who take notes. The students have little or no participation in learning and experience passive rather than active learning.

When a teacher is lecturing, he does most of the talking. Although questions and answers may be solicited from time to time, the lecture method is primarily a monologue method of teaching in which the teacher is the expert.

It is an extremely fast method of instruction and the most commonly used in schools, colleges and other learning institutes. It can be used along with other methods of teaching.

TYPES OF LECTURES

There are two types of lectures used to convey information to the learners. These are: formal and the informal lectures.

THE FORMAL LECTURE

The formal method of lecturing depicts a scenario where the teacher acts as a preacher. The learners are not allowed to participate in any way, the method is wholly teacher dominated. The teacher may use or may not use teaching aids. The lecturer dominates conveying of information while the learner is passive.

THE INFORMAL LECTURE

In this method, the learners are allowed to participate by asking questions. While lecturing, the teacher may use models and demonstrations to enhance understanding.

APPROPRIATE SITUATIONS

1. When introducing a new topic.
2. When presenting materials not easily available e.g. when there are no textbooks to refer to.
3. When supplementing textbook materials.
4. When summarizing important points and capitulating certain generalizations and principles at the end of the lesson.
5. When attempting to cover a lot of material within a short time.
6. When you want to reinforce written work.
7. To synthesis many sources of information.
8. To inform lectures, the expected result of a learning activity.
9. To bring in expert knowledge in class.
10. When explaining certain difficult and theoretical point which cannot be demonstrated.

INAPPROPRIATE SITUATIONS

1. When dealing with learners of low levels.
2. When teaching a skill.
3. When material to be presented is easily available.

PREPARING AND PRESENTATION

For effective lecture preparation and presentation the following phases of a lecture should be considered;

Phase 1 The Beginning of the Lecture.

- Use an introduction that will catch the listeners' interest e.g. raise a question to be answered by the end of the lecture.
- Provide a brief overview of the lecturer content either verbally, with a handout or through an outline on the chalkboard.
- Tell the learners how you expect them to use the lecture material.
- Define or explain unfamiliar terminologies.
- Highlight objectives.

Phase 2. The Body of the Lecture

- Allow for some flexibility in the amount of content to be presented in order to respond to learners' questions and comments.
- Determine the key points to be developed during the class session
- Organize materials in some logical order.
- Prepare examples to clarify and emphasize key ideas
- Provide transitions which show the relationships between key ideas.
- Effectively incorporate audiovisual or support materials e.g. chalkboard, diagrams, flowcharts etc.
- Throughout the lecture, check on understanding by asking learners to answer specific questions, asking for learners' questions and checking on their understanding.
- Watch the learners for non verbal cues of inattention, confusion or misunderstanding.

Phase 3. The Closing of the Lecture

- Answer any question raised at the beginning of the lecture
- Provide closure for the lecture by summarizing lecture material and highlight what lies ahead, relating lecture material to past or future presentation or asking a learner to summarize the lectures key ideas.
- Restate what you expect the students to gain from the lecture.

- Ask for and the answer learners questions.

Consider the following throughout the phases:-

- Variation of speech in terms of rate, volume and pitch
- Face to Face communication with the students and not to blackboard, walls, notes or floor.
- Stop writing and talking at intervals to check for student understanding.
- Use sense of humor
- Avoid repetition of pet words or phrases (okay, eh)
- Use gestures and physical movement to complement verbal statements and teaching styles.
- Review lecture material prior to class
- Ensure a conducive classroom environment.

WAYS OF IMPROVING THE LECTURE METHOD.

There are two important inherent characteristics of the lecture situation that should be kept in mind;

- The amount of verbal information can be effectively squeezed into a specified amount of time.
- Ability of listeners to absorb aural information. Hence, the lecture should be structured so that the major items appear at intervals of 15 to 20 minutes.
- The rest of the time should be taken up by examples, proofs and anecdotes that support the major points.

ADVANTAGES OF LECTURE METHOD

- It is economical with classroom time because it brings the teacher's ideas into the immediate focus.
- The method permits the teacher to cope with large numbers of students and when necessary to cover a large amount of material.
- It helps the students develop ability to listen attentively,

critically, and with appreciation.

- It provides exposure to knowledge not readily found in assigned readings or the common experience of students.
- Useful in introducing new topics as it provides the student with basis or background for further learning or study.
- Requires less rigid class or space.
- The teacher spends little on teaching aids and other equipment hence it's less expensive.
- It encourages the art of note taking which students will find very useful when they start independent studies and research at the higher levels of learning.
- It earns further status for the teacher allowing him to reveal his knowledge of the subjects to the students.
- The method encourages students to read widely since they cannot possibly write down all that the teacher says, and therefore would have some gaps here and there in their notes which they would have to fill up through extra reading.

DISADVANTAGES OF LECTURE METHOD

- Knowledge gained without participation is not assimilated.
- It tends to be a one way process with students in a passive role.
- It is difficult to measure student learning and/or interest.
- It is often inadequate for teaching skills and attitudes.
- It tends to emphasize the interests of the lecturer rather than students.
- It tends to encourage acceptance of the teacher as the final authority.
- It does not cater for individual differences among the students, with result that the slow learners, slow writers, and weak students are dragged along at a speed they cannot cope with. For example, in lower levels this may result to loss of interest and lack of attention usually manifested by some learners sleeping or day dreaming.
- The strategy progresses at the pace of the speaker rather than that of the learner
- Information delivery is likely to be affected by noise.

HOW TO MAKE THE METHOD EFFECTIVE

1. A teacher should have a good personality (his personal appearance and the manner of dressing) and should be able to;
 - Use a well modulated tone.
 - Use correct pronunciations
 - Vary tones
 - Use facial expressions
 - Use gestures
2. Teacher should be clear and loud enough.
3. By checking the students' understanding by asking questions.
4. Beware of non – verbal signals from students (do not ignore them).
5. By adapting a language to the level of the students' understanding.
6. Make use of illustrating devices where necessary i.e. teaching aids should be used where appropriate.
7. Move around when delivering the lecture i.e. stop standing at one point.
8. Maintain eye contact.
9. Use variation in speed, voice pitch, interaction styles and pauses.
9. Understand the note taking speed of your learners.
10. Make it brief, interesting.
11. Involve learners in the lesson.

5. DEMONSTRATION METHOD

A demonstration is any activity in which a teacher (instructor) uses experiments or some other actual performance in order to illustrate a principle or show learners how to do something.

It is a method of teaching where by the teacher carries out an activity so that learners can imitate and learn a new skill.

It can also be defined as the method whereby the learner feels a real or life like example of the skill or procedure to be learned. It can either be recorded or played back by means of media such as video or film.

It is also an instructional procedure by which the cause- effect nature or property of any phenomenon whether social, psychological or physical is determined by actual experience or experiment under controlled condition.

This method involves the presentation of a pre-arranged series of events to a group for observation.

A Swiss philosopher called Pestalozzi in 1746-1827 stressed that education must proceed largely by doing instead of by word.

TYPES OF DEMONSTRATIONS

(i) Drill and practice

In this type of demonstration a learner is led through a series of practice exercises designed to increase fluency of a new skill or refresh an existing one. This method assumes that the learner has previously received some instruction on the concept, principle or procedures that is to be practiced. To be effective the drill and practice exercise should include feedback to correct and remediate errors that a learner might make along the way.

ii) Tutorial

A tutor in form of a person, computer or a special printed material presents the content, poses a question or a problem requiring a learner's response. It then analyzes the response and supplies appropriate feedback and provides practices until the learner demonstrates the pre determined level of competency. It is most often done on a one to one basis on skills such as reading and arithmetic.

iii) Gaming

It provides a "playful" environment in which the learner follows prescribed rules as they strive to attain a challenging goal. It is a highly motivating method especially for devious and repetitive content.

iv) Simulation

Using this method the learner confronts a scaled down approximation of real life situation. It allows realistic practice without the expenses or risks otherwise involved. It may involve participant's dialogue, manipulation of materials and equipment or interaction with a computer. Inter personal skills and laboratory experiments in physical sciences are popular subjects for simulations.

V) Discovery

The discovery method uses an inductive or enquiry approach to learning that presents problems to be solved through trial and error. The aim of the discovery method is to foster a deeper understanding of the content through involvement with it.

VI) Problem solving

In this method the learner uses previously mastered skill to reach a resolution of a challenging problem. The learner must define the problem more clearly, perhaps state her hypothesis, examine data and regenerate a solution. Through this process the learner can be expected to arrive at a higher level of understanding of the phenomena under study.

APPROPRIATE SITUATIONS

- When time is not enough for all learners to do the activity
- When learners need to do practical work.
- When facilities are not enough for all learners.
- When content is hard to grasp.
- When equipment or materials are expensive or delicate.
- When high degree of safety is required and learners cannot meet them on their own.

INAPPROPRIATE SITUATION

1. It cannot be used where there are no facilities.
2. It cannot be appropriate in a situation where some learners are disabled or handicapped.
3. Not appropriate for some subjects.
4. When learners are not well versed in the subject.

5. When facilities are too costly.
6. When the class is too large.

PREPARATIONS

- Select demonstration in terms of needs of the learners, the content to be learned and material available.
- As the teacher prepares the demonstration he should make sure that it will run smoothly.
- The physical environment should be arranged carefully so that learners observe and hear.
- The facilities should be available and in good working condition.
- The room should be well arranged, well lit and well ventilated.
- The teacher should use other teaching aids in order to enhance understanding.

PRESENTATION OF DEMONSTRATION

- The teacher should show the learners how the activity is carried out step by step.
- He should show the learners the procedures for operating the tool, equipment and materials accurately and safely. Actual objects should be used for practice purposes by the teacher as the learners observe.
- After demonstrating the learning activity, the teacher allows each one to practice the activity following the guidelines.

ADVANTAGES OF DEMONSTRATION METHOD

- Demonstration can open a learners' eye to a new world of understanding and help him acquire knowledge first hand.
- It shortens the time of learning and lengthens the memory of facts and principles.
- It is quite effective in making clear to participants and observers the relationship between skill and their purpose.
- It aids in bringing about a relationship between the theory and

practice.

- It fosters good thinking in groups and individuals.

DISADVANTAGES OF DEMONSTRATION METHOD

1. It consumes time.
2. Lack of materials to use for demonstration may impede its application.
3. Mistakes made at the time of demonstration are easily learned.
4. It may cause stampede when children are asked to come to the front to see a teacher demonstrate a process.
5. Learners may become noisy and class. Control may be lost.
6. If precautions are not taken (heeded to), it may be injurious to learners.

HOW TO IMPROVE THE METHOD

- Plan the demonstration in great detail and rehearse it.
- Make sure that all the materials and illustrations are nearby before demonstration begins.
- Breakdown the demonstration into simple step patterns so that the class can easily understand it.
- Wherever possible, involve students in the demonstration
- Ascertain after each step whether the students have grasped the meaning of concepts and explanation, if not repeat.
- Verbal explanation should heighten the interest and enhance learning.
- Observable guides to be used should be those which require the students to be actively involved in making observation, recording analyzing tabulating or otherwise be active in observing and analyzing and interpreting facts.
- Plan follow up activities that permit sharing of impressions, analyzing records, drawing generalizations and making applications.
- Make an assignment based on the demonstration. This will help evaluate learners.

6. FIELD TRIP

A field trip is a planned learning experience carried outside the classroom that helps a learner to achieve educational objectives. This may be within the school compound or away from school. Field trip may also be referred to as;

1. Field work research or study.
2. Excursion.
3. Field tour.
4. Field experience.

APPROPRIATE SITUATION

1. It grows out of the learners' needs for first hand real-life experiences in their areas of study.
2. Where phenomena can not be brought in class for observations e.g. power generation, distillation processes and satellite launching machines.
3. When searching for information in your area of study for example, history, geography, business, public health, music, art, cultural values of a community among others.
4. When escaping from excessive verbalism which can be boring into more exciting concrete experience.
5. When information in text books cannot provide for observing the balance of nature in an arboretum, and even for studying the heavens (planets etc).
6. When the institution facilities cannot provide the necessary experiences to learners.
7. In cases of research projects by the learners.

INAPPROPRIATE SITUATION

1. When parents are not informed in advance and their conceit received.
2. When learners are not briefed on topic to be discussed on.
3. When the principal is not informed in advance as he can disapprove the trip.
4. When objectives to be achieved outside during the trip are not outlined.

PREPARATION FOR FIELD TRIP

1. Identify the topic to be researched.
2. Generate objectives.
3. Prepare questionnaire for each student to fill when out.
4. Have a proper list of learners going out for the trip.
5. Lesson plan for the trip.
6. Put learners into groups for discussion when they go out.
7. Seek for permission slip.
8. Inform the learners on time for leaving.

BEFORE TRIP

1. Secure administrative approval for field trip before you leave.
2. Secure parental approval from each student.
3. Set up a time schedule for entire period of trip and let students take a copy home.
4. Make arrangement for transportation.
5. Ask learners to pack lunch.
6. Find parents who will volunteer to accompany the group.
7. Make a list of names and addresses of those going for field trip and also those remaining behind and hand over to the principal.
8. Discuss with learners, the purpose of the trip, safety precaution to be taken when out, such as;
 - not tasting anything in a chemical factory.
 - not taking Photographs without permission.
 - Not playing around or running when in the factory as that can cause accidents.
 - And also avoiding anything flowing e.g. hair which has long braids or loose garments as they can get entangled in any machine.

EXECUTION OF THE TRIP

- i) Pack extra lunch.
- ii) Give each parent volunteer a list of learners in his or her group
- iii) Introduce each parent to learners in his group and check every learner's health before leaving for the trip.

- iv) Take attendance of the students inside the bus before leaving.
- v) Upon arrival learners should unload orderly or wait until officially welcomed.
- vi) Introduce the resource person and if possible state his credentials to the learners.
- vii) Introduce the learners to the resource person before he takes over.
- viii) During the presentation, the learners will be required to ask questions and take notes.
- ix) After the visit, all learners to take lunch and thank the resource person.
- x) On arriving from the trip, thank the parents, bus driver, and the school administration.

FOLLOW – UP

The review of the trip will be done immediately after the trip where learners will be evaluated by the teacher on the discussion carried out.

The teacher should also give the learners some quizzes to attempt so that he can discover whether they understood anything during the trip.

ADVANTAGES

1. Allows for a direct involvement by the learner because the method emphasizes direct experience with material.
2. Provides an individual with a feeling of competence after seeing the real thing.
3. Provides a multi-sensory approach which provides for individual learning style e.g. learners can see, feel, smell, hear and even touch.
4. Promotes a socializing atmosphere for learners and teachers as they work together.
5. Provides opportunity for a more relevant curriculum because

the experiences provided often develop understanding and skills that can be used outside of the school setting.

6. Develops skills necessary for more advanced study or research.

DISADVANTAGES

1. Requires a very knowledgeable teacher who can function in a setting where many diverse questions are being asked by learners.
2. Can be distracting to learners because of many activities that often take place simultaneously e.g. in an industry or factory.
3. Information cannot be obtained rapidly by direct experience.
4. Requires careful and thorough planning in order to be effective.
5. Can be expensive.
6. Results in a loss of time.
7. Risky i.e. accidents may occur.

WAYS OF IMPROVING THE METHOD.

1. You have as a teacher to make a follow-up so as to stress on weak points that were not clearly tackled by the resource person.
2. You can summarize with learners all that took place after each group presents what they discussed, and then you give some assignment.
3. Tape recorders, radio tapes, video tapes and cameras can be used in future for reference and also to benefit those who didn't attend the trip.

7. QUESTIONING METHOD

A question is a statement for which a reply is expected.

Questioning is the art of asking questions.

TYPES OF QUESTIONING

a) Memory questions

This is a method used when the teacher wishes his learners to recall information, emphasis facts, drill for retention of facts and obtain some measure of achievement.

They are aimed at assisting learners to develop and use critical thinking abilities about the lesson and create interest and come up with an answer.

Characteristics

1. It requires short answers.
2. Promotes guessing
3. Often have one correct answer i.e. a learner can give an answer using different words but the answer is correct.
4. Requires a little thinking.
5. It is based on knowledge rather than understanding (e.g.)
which country won the 2006 World Cup? Italy.
Who was the best player in 2006 Word Cup?

b)The thought provoking questions

This method calls for knowledge and understanding.

The learners must be able to think and explain about the subject and produce a logical correct answer.

Guessing is minimal and critical learning is the result.

Characteristics

1. They challenge the learner's effort more than the memory type question; and command greater attention and reflection.
2. They stimulate further activity for judgment, analysis, organization, comparison, and understanding inside a logical thinking, i.e.
 - Why do we clean a cow's udder with warm water before milking?
 - Why do we attach lining to a garment?

c) Divergent thinking questions.

This is a variety of questions, which involve probing the learners.

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These questions demand for originality in the learners, and enable them to predict, hypothesize, infer or reconstruct. Different responses from different learners may be expected.

d) Evaluative Questions.

To answer any of them, the learner must have passed through all the other levels of learning and he should be somewhere at the productive skill level. To answer a question asking for his evaluation, the learner will have to have a wealth of information and understanding. Then he should have acquired the reproductive level of skills, only then will his response be proper to an evaluative type of questions. The learner will have to take a decision on a certain problem and he should be able to defend and justify his choice. They are used to evaluate the students after they have gone through the learning.

AIMS OF ASKING QUESTIONS ARE:-

- i. **To obtain feedback.** For the teacher as well as the learners.
- ii. **To understand the learners.** Asking questions can easily check the entry behavior, or present level of learning...
- iii. **To check on work done.** Before a teacher starts his new lesson, he would like to know what has been done before that lesson. Also when some assignment is given to learners to do in class or at home and if the teacher wants to check quickly whether the work has been done or not, he can do that by asking the learners.
- iv. **To promote interest.**
A change in activity will help to sustain interest and the use of questions is a deviation from routine lecturing which provides stimulus variation. Also by probing a teacher may lead his learners into further exploration of knowledge and thereby create some more interest in them.

- v. **To demonstrate difficulties.**
By asking learners question the teacher may draw their attention towards some difficult points. This will make them think.
- vi. **To test comprehension.**
During any teaching situation, either when the teacher has given a lecture or some instructions to carry out a certain project, it will be essential to know how far the learners have understood the content or followed the instructions. On the basis of the learners' answers, their comprehension will be judged.
- vii. **To assess ability.**
In activity lessons or group projects, the learners may have to carry out many activities which are not taught by the teacher. Say, a class is planning to go on a visit to a place of educational interest; the learners will have to plan so many allied activities, like writing a letter for permission, traveling or walking a distance, preparing a questionnaire to be used for gathering information. This can be done only by knowing it from the learners themselves, and this can best be gathered by asking questions.
- viii. **To Develop Originality.**
Most of the knowledge comes from the teacher. So, even in the situations where it is within the reach of learners, the teacher will tell them what he thinks is right. It means the learners accept all the facts given by teachers, and then form the habit of dependency. In order to have the creative ability, their own ways and means of improving their knowledge, the learners should be asked questions about their thinking on the new concept or new procedure, In case of some scientific phenomena, the teacher should question to know the learners line of thought. The learners may give some reason which the teacher might not have thought of. Thus, it seems that if a teacher is conscious, there are enough reasons to put questions to the learners.

APPROPRIATE SITUATIONS FOR QUESTIONING

- (i) At the start of a lesson to create interest and curiosity.
- (ii) In the development of a thought on a concept.
- (iii) When demonstrating a skill (i.e.) how do we insert a zip?
Show them the method.
- (iv) When summarizing a lesson.

INAPPROPRIATE SITUATIONS

- (i) New course
- (ii) When introducing a new topic
- (iii) When time is limited.
- (iv) When the questions are out of topic.

HOW TO PREPARE FOR QUESTIONING

1. Use good grammar and language familiar to the learner.
2. Frame your question in such a manner as to ensure the answer you want is within the context of what you are teaching.
3. Never suggest the answer in asking the question. This destroys the intent of questions and deceives the learner in thinking he/she knows the material or is making progress.
(i.e.)
This is a pen.
What is the name of this item?
4. Question should be asked in a normal conversational tone as part of the lesson.
The way a question is presented is often as important as the question itself in determining the effect it will have.
5. Questions should include only one idea as double questions are difficult to follow and complete thinking.
(i.e.) *How and when did you report to college?*

THE ART OF QUESTIONING

Competence in forming questions, and knowing whom and when to question, leads to effective teaching.

Questioning is a technique used by teachers to achieve certain objectives, but the same question, if not constructed properly, will not help to achieve the intended objective. So, it may help teachers

to know how to ask questions.

The following errors should be avoided.

- (a) The double (double barreled) question (How big is Machakos and how far away is it from Nairobi)?
- (b) The ambiguous question (What happens when it rains?)
- (c) The guessing question (Is mercury solid or fluid)?
- (d) The question outside learner's experience (What would you do if you fell into a snow draft)?

HOW TO PRESENT

- o Grade the questions i.e. use all the varieties and use suitable language:
- o The teacher should be interested both in questions and answers.
- o The questions should be asked at appropriate speed.
- o Ask the question first, and then name the learner to answer if after a slight pause.
- o Be prepared to modify questions if the correct answers are not obtained.
- o Reinforce answers appropriately.
- o Address the question to the class; hesitate and then call on a specific learner.
- o Scatter questions over the entire class; and avoid any consistence/ regular procedure of questioning (i.e.) rows, alphabetical order.
- o Allow a reasonable time for answering; as time is needed to formulate an answer but do not allow too much time.
- o Pose questions within the ability of the learner to whom the question is addressed. (i.e.) direct difficult questions to capable learner and simple ones to the less capable.
- o Ask questions to the inattentive (i.e.) direct questions to one not concentrating.
- o Require learners to give complete answers. Do not repeat answers given in low tone, tell them to repeat loudly.
- o Encourage learners to ask questions but keep them

relevant and demand good English; also help them formulate the questions.

- o Do not permit chorus answers; or group responses. This leads to loss of class control and makes it hard to pin point those who make errors.
- o Do not ask questions which can be answered by guessing since this promotes bad study and learning habits; also has no value.
- o Learn to use the key words of questioning namely: How? Why? Which? What? When? Where?

ADVANTAGES OF QUESTIONING

1. Develops processes of thinking and guides enquiry and decision making.
2. Helps acquire and clarify information; answers concerns and develops communication skills.
3. Determines the knowledge learners bring to the class so lessons can be made to meet their needs.
4. Provides motivation by encouraging active participation in learning.
5. Leads learners to consider new ideas and make use of ideas already learned.
6. Help learners clarify their ideas, structure their study and learn about things that interest them.
7. Encourages learners to ask their own questions.
8. Helps teacher gain information from learners on performance and understanding.
9. Provokes learners and teachers to share ideas they have.
10. Challenges belief and guides reconsideration of values people hold.
11. Helps teachers' assess the effectiveness of their own teaching.

DISADVANTAGES OF QUESTIONING

1. Introvert and self conscious learner may not participate actively.
2. Those that cannot bring out their ideas well or have language difficulties will contribute little or shy off all together.

3. Consumes a lot of time.

WAYS OF IMPROVING QUESTIONING

All teachers should ensure that they use the questioning techniques during questioning effectively; (i.e.)

- good grammar;
- good framing of questions,
- use of correct questions and
- recognizing the entire learners in the classroom despite their level of understand.

8. CASE STUDY

DEFINITION

This is the study based on the analysis of one or more cases or case histories. They are real stories or examples with a message for us to study.

Humans are story – telling animals and the use of cases gives a teacher an immediate advantage because he has the attention of the audience.

APPROPRIATE SITUATIONS

Past cases are studied as examples, e.g. law and medicine.

- i. When you want to illustrate general principles and good practice.
- ii. When correct answers and facts have a high priority.
- iii. When you want to make open – ended decisions although they are historical lessons with facts.
- iv. When we want to create empathy with the central characters.
- v. When there is a controversial issue.

ADVANTAGES

- 1) Develops analytic and problem solving skills.
- 2) Allows for exploration of solutions for complex issues.
- 3) Allows learners to apply new knowledge and skills.
- 4) The teacher has the full attention of the

DISADVANTAGES

- 1) **Lack of Time:** - some cases are too rich and complex that one cannot deal with all the issues in the available time.
- 2) **Learners may not see relevance to own situation.** This may lead to a lack of commitment or involvement in the case unless

learners have a stake in the outcome of the case. Thus they may consider the results as mediocre (nothing).

- 3) **Lack of experience** with the case method.
- 4) **Insufficient information** can lead to inappropriate results.
- 5) **Not appropriate** for elementary level.

PREPARATION

- 1) Decide on the topic, i.e. is there any conflict, new idea or personal experience that is associated with the topic? Can the topic be linked to cotemporary problem such as global warming, social issues, etc. this is the hook / linkage into the case.
- 2) Review and research the topic and the hook (linkage) into the material so that you can see further connections and possibilities.
- 3) Rapidly write all the possible principles that you might teach using this topic in your class.
- 4) Make a list of all the possible characters (fictional or real) that could be affected by this topic. Do all these characters have problems to be solved?
- 5) Write a draft of a case from the viewpoint of a person caught in the thick of the case problem.
- 6) As you write look for opportunities to introduce terms or concepts that are important to your course.
- 7) Go through the case again and list the major and minor topics that are likely to come up in a discussion of the case.
- 8) After you have reasonable version of the case write a series of discussion questions to include at the end of each section. These study questions will assist learners to recognize the important issues embedded in the case.

PREPARATION

There are two general preparation approaches.

- i. List general principles that you wish to teach, then start looking for a good story to use that might teach them.
- ii. Spot a good story that seems fit for your course, and then ask yourself what principles you will illustrate with the case.

Whichever approach you take, choose the case teaching method you will use.

NOTE:

A good case

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- tells a story
- is set 5 years ago.
- creates empathy with central characters.
- includes quotations
- is relevant to the reader.
- is short.

PRESENTATION

Write as you speak is a sound advice for case writing

1. Know your audience

Writing for elementary school children is not the same as writing for secondary school or tertiary institution students. The problem is different, so is the language and the traditions, e.g. young men have strong desire, they like to be superior, elderly men are suspicious.

2. Not just facts.

If you don't use examples the reader won't remember the facts.

3. Point of view

This makes your writing readable; you must have a hero who undergoes trials and tribulations. He must have a name (not cute names) e.g. do not call a lung cancer doctor Dr. Cough or a pathologist John crime. This makes it a joke and should be avoided. You can use animals e.g. a horse with a broken leg. An U.S. Army taught Malaria with a booklet about Ann the Anopheles Mosquito.

4. Human interest

You measure this by the number of human names you use, e.g. aunt, guy, etc.

1) **Use Dialogues:** people choose to read dialogues over any other writing style.

2) **Use conversational writing:**

Write the way you speak.

3) **Sentence length**

Short sentences are easy to read and comprehend. Use complex

sentences now and again but punctuate them well.

5. *Great beginning and strong ending.*

Your beginning should capture interest, e.g. grab the reader, introduce character and establish a setting.

Make the end interesting and worth thinking about.

6. *Avoid heavy sounding words:* -

Lighten your writing for enjoyable reading.

WAYS OF IMPROVING THE METHOD

- (a) Add more time because some cases are rich. Neatly editing or focusing the case can do this.
- (b) Having regular discussion where delinquency will be detected can solve lack of preparation.
- (c) Give more than one case study to improve lack of experience, which can hinder learning how to analyze a case study.
- (d) Be sure you know what you want to accomplish in the case; facts, principles, and viewpoints the learner should cover, i.e. have clear goals.
- (e) Make sure learnerS have a stake in the outcome of the case so that they can be committed and involved, i.e. the case should have relevance to their interest.
- (f) A case can be improved by making it have general applicability, i.e. should have more than a minor or local problem.

ADVANTAGES

- It inculcates knowledge and facts.
- It improves participants' skills in problem analysis, communication and decision-making.
- It affects attitude formation and particularly brings home to the participants that nothing is absolutely "*right*" or "*wrong*" in the field of human behaviors.

EXAMPLE

*Read the following **case study** and answer the questions based on it.*

CASE STUDY

You work for Kamau and sons Ltd, a manufacturing company. You served your apprenticeship there, and then worked for another four years in the production department before you were made a supervisor.

The company changes hands. New owners take over and a new general manager Mr. Odhiambo arrives. He's full of ideas. One is that people will work much more enthusiastically if they feel they are part of a team. He's right there. But he decides that everyone has to be seen to be equal. He will move his office into an open-plan area to the shop-floor. Everyone including all the managers must clock in and clock out.

Everyone is to eat in the same canteen-there will no longer be separate canteens for managers and staff. Everyone will take their holiday at the same time, when the factory will close down.

Well, these seem to be good ideas. The staff and the union all go along with the manager's plan. A few people dislike the new scheme - they feel that hard-earned privileges and rights have been lost but for the moment they keep quiet.

Next Mr. Odhiambo decides on a new plan. In order to increase productivity everyone will work an extra hour. They will be paid extra for the hour.

How is he to tell the staff of 108 people?

Mr. Odhiambo chooses one method and tells the staff. They refuse to have anything to do with the scheme and the union supports them.

Odhiambo calls the union leaders and threatens them with dismissal if they don't agree to his plan. The union threatens a strike if he goes ahead. In no time, the factory that was once a happy and contented place is in an uproar and on the verge of a strike. In the end Mr. Odhiambo had to abandon his plan.

1. Explain what the problem is in the scenario.
2. Discuss how Mr. Odhiambo could have handled the problem in a better way.
3. Identify the most appropriate methods of communication that Mr. Odhiambo should have used to inform the workers of the intended changes in their working conditions?

9. ROLE PLAYING METHOD

DEFINITIONS

1. Role playing as a teaching methodology is the conscious acting out and discussion of the role in a group. In the classroom a situation it is briefly acted out so that the individual learner can identify with the characters.
2. It is a spontaneous portrayal (acting out) of a situation, condition or circumstances by selected members of a learning group.
3. Role playing, a derivative of a sociodrama, is a method for exploring the issues involved in complex social situations. It may be used for the training of professionals or in a classroom for the understanding of literature, history, and even some aspects of science or mathematics.

N.B

Although role playing and drama are similar, they are also very distinct in style. Perhaps the most strategic point of difference is the handling of the subject matter: genuine drama usually requires a script, whereas role playing retains the element of spontaneous (not premeditated reaction) or at least extemporaneous reaction.

TYPES

There are four styles that can be grouped as:

1. Tabletop,
2. Live action Role Plays (LARP),

3. Online MUDs, and,
 4. Free Form.
- i. **Tabletop** – Role-playing usually incorporates set rule established in a book, dice or determinants, a storyteller, and a character sheet to determine outcomes. Think Dungeons and Dragons, White Wolf's World of Darkness and Aeon-Trinity table-top games, GURPs, etc. it is also used in military strategies.
 - ii. **LARP, or Live Action Role Play**, is a hybrid of table role-playing, mixed with real time acting. In this type of role-play, individuals will interact within an established environment with a storyteller, narrators, and other characters; will usually base character creation on books; and will sometimes use dice or determinants for outcomes, and use props, and surroundings to set the stage.
 - iii. **Online gaming** refers to the growing MUDs (Multi User Dungeons, and all variations there-of, MUCKs, MUSHs, MUDDs, MOOs, Diku, Mordor, and MajorMUDs).
 - iv. **Freeform role-playing** is a reference to online games that have no predetermined actions, and is completely run by players. People will freely type out actions, and use dice or determinants to figure outcomes. Chat room and PBEMs (Play by E-Mail) are considered free form RPGs.
- However, there are several crossover versions that will transcend the normal boundaries.

APPROPRIATE SITUATIONS

It is normally used in situations:

1. Which contain two or more different viewpoints or perspectives. The situation is usually written as a prepared brief and the different perspectives on the same situation are handed out to the different people who will come together to discuss and act (role play) the situation.
2. When aspects such as attitudes, changes of view,

relationships, and emotional impact (experience) of subject is to be passed to the learners. Insight into the feeling, reactions and attitudes surrounding the situation in question are more likely to be gained compared with merely reading about it or hearing a lecture on it.

3. When more active participation is to be encouraged to a level higher than that derived from many other discussion techniques.
4. to provide a “safe” area in which learners express feeling and share experiences, under a guise of “make believe”
5. When learning is geared to impartation of problem solving; communications; and self – awareness skills. These kinds of skills are needed for flexible, creative and rational thinking and must be exercised, practice, and learned in a process of interaction, risk-taking, feedback, and encouragement.

ADVANTAGES

1. Role playing can help the learners become more interested and involved, not only learning about the material/subject, but learning also to integrate the knowledge in action, by addressing problems, exploring alternatives, and seeking novel and creative solutions.
2. Role playing is the best way to develop the skills of initiative, communication, problem-solving, self-awareness, and working cooperatively in teams/groups.
3. Role playing can be used with learners of most ages (preschool to adult learners.)
4. Role playing allows people to make mistakes in a non-threatening environment. They can test several solutions to very realistic problems, and the application is immediate.
5. It fulfills some of the very basic principles of the teaching-learning process such as learner involvement and intrinsic motivation. A positive climate often results in which one can see himself as others see him.
6. The involvement of the role playing participants can create both an emotional and intellectual attachment to the subject matter at hand. If a skillful teacher has accurately matched the problem situation to the needs of his learners, the solving of realistic life problems can be expected.

7. Role playing can often create a sense of community within the class. Once the class learns to share a mutual confidence and commitment to the learning process, the sharing of analysis over the role situations will develop comradeship never possible in monologue teaching methods such as the lecture method.
8. Role playing provides learners with a chance to act out, rather than merely talk about, ways to solve problems effectively. Many learners find this to be an enjoyable and instructive supplement to class discussions. It also gives teachers the opportunity to provide learners with supervised practice in dealing with “real life” problem situations.
9. Role playing can be effective way to help learners integrate their socio problem solving skills. Role playing enables learners to:
 - a) Practice calming down during a problem situation;
 - b) Act out solutions in an effective, cooperative way;
 - c) Observe the consequences of their actions; and
 - d) Practice persistence and overcoming obstacles.
10. in a more intensive and personal way role playing, more than other teaching-learning methodologies;
 - a) allows learners to develop an understanding of others’ perspectives;
 - b) gives learners the chance to gain insights into interpersonal challenges they are likely to face in their careers and private lives. This is because Role-playing is an especially effective teaching-learning tool contributing to long-term retention of fundamental concepts.
 - c) Offers a constructive channel through which feelings can be expressed and feedback processed;
 - d) Presents learners with a forum for building self-esteem and confidence;
11. Role playing is a tool for intensified and accelerated learning since learning takes place at cognitive, psychomotor and effective domains.
12. Role-playing is simultaneously interesting and useful to learners because it emphasizes the “real-world” side of

science or social situations. It challenges them to deal with complex problems with no single “right” answer and to use a variety of skills beyond those employed in a typical teaching methodology. In particular, role-playing presents the learner a valuable opportunity to learn not just the course content, but other perspectives on it.

13. As a learning methodology, role-playing attempts to help learners discover personal meanings within their social worlds and to resolve personal dilemmas with the aid of their social group.

DISADVANTAGES

There are considerable limitations, however, in the use of this technique in teaching.

1. Role-playing cannot be effective when the educational objectives are complex; the insight aimed for should be in relation to clear-cut problems; it is seldom found satisfactory when there is only one answer to a problem.
2. The insecurity of class members. Sometimes it instills fear, anxiety or undue embarrassment to some members of the group for example some may react negatively to participating in a situation which will be discussed and possibly criticized by other members of the class.
3. Role-playing takes time. The class discussion of a five-to-ten-minute role playing situation may extend to several times the lengths of the situation itself.
4. The relationship of the people in the group may emerge as a negative factor. For example, previous interpersonal difficulties experienced by group members may arise in class to corrupt the role playing situation.
5. Also, if the group has people of different status, they may be reluctant to become involved for fear of being humiliated before the members of the class who are smarter or more popular.
6. When teachers give into their own impulses and slip from dealing with the group problem to explore some issue to focus on the real-life personal problems of a given individual, this may result into a permanent attitude or emotional damage.
7. Sometimes teachers fail to appreciate the complexity of a skill

they're learning, and it's important to emphasize that directing role playing is complex. And it helps if the person doing their learning is also trained in other ways.

8. It is difficult to role play mathematical and most scientific problems and issues.

PREPARATION AND PRESENTATION

The key person is the producer or leader, who is usually the teacher. He may undertake to define all the necessary details himself, or, better still, he may lead the group towards a consensus in dealing with each step in the procedure. At all stages he must bear in mind the characteristics of the group-their sex, background, and known attitudes. The major steps usually associated with role-playing are as follows:

A. PREPARATION

(a) Defining the problem and establishing a situation

The problem to be clarified/exposed/solved should be clear-cut, significant and preferably close and important to the persons playing the roles or observing the performance. The situation in which the problem is projected should be simple, as complexities can distract attention from the main problem/objective.

(Role plays must be focused and the objectives must be clear and understood by every one involved so that both the characters and the audience understand the problem at hand).

(b) Determining the roles to be played

The involvement of the group in this step is often valuable and educationally productive. The producer/teacher should take careful note of the characteristics of each role, and preferably he should write them down. The number of the roles should not be too large, perhaps five major roles as maximum.

(c) Casting the characters

Only volunteers should be asked to role play. Nobody should be subjected to undue pressure to take part, and it is sometimes helpful if the teacher himself takes a difficult or unpopular part/role. Additionally, it is best to cast students against their parts. For example, an aggressive individual should not be assigned to be a bully or an overweight individual to be teased in play.

(Students must realize that acting ability is not at stake here but rather the spontaneous discharge of how one thinks the character of his role would react in the defined situation).

(d) Briefing the participants (Brief and warm up)

Briefing may be oral or written. Each player can be given a brief written synopsis (outline) of the role to be played, including the situation in which the dialogue and action will occur. It is useful to give a little time for assimilation of the written material, followed by a short session of question and answer. It should contain enough information for both parties to engage in a believable and relevant conversation, which should be in line with the objectives. Much detail as is necessary should be given – too little and there won't be enough to sustain a conversation, too much and people will be swamped with information, most of which they either won't need or won't remember.

Players may be instructed publicly so that the audience knows what to expect or privately so that the audience can interpret the meaning of their behavior.

The briefs for all sides of the role play should be unambiguous and totally in line with the objectives.

B. PLAYING

(i) Acting out the scene.

The action should be spontaneous development of the basic scenario presented in the briefing. Creativity by the actors should be allowed within their character roles and the situation should not be over-structured. Throughout the entire process problems which arise in role playing situations should be dealt with as they arise. For example the backstage silent member must be encouraged to contribute.

It is accepted for the teachers to coach students to portray their roles effectively as the action is going on. This coaching provides students with support and feedback.

(ii) Stopping

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It is important, however, to arrive at the right timing for the piece. Most situations will be able to be explored and have the objectives achieved in substantially shorter periods of time, 5 to 10 minutes initially and may be maximum of 1 hour when the teacher and the learners have embraced the method. In a few cases it may be useful to replay the scene, but this should be agreed beforehand and used very sparingly. It may be possible to explore a different angle of the situation by varying slightly the role or offering a change of stress in the original scenario.

Role playing should be discontinued if:

- (a) an actor or the audience begins acting in a silly or off-task manner;
- (b) a student gets aggressive or emotionally upset; or
- (c) There is prolonged negative behavior or confusion about where the role play is going.

(iii) Involving the audience

Assign audience members to observe specific points such as:

- Was the person calm when he/she tried the solution?
- What was the problem, and what feelings did the actors show?
- Was the solution a cooperative, positive one? Did it make the situation better?
- How was the person's timing, tone of voice, and body language as he/she carried out the play?
- Was there an obstacle to the first solution? If so, how well did the actor handle it?
- Are there other solutions that could be used to solve the problem even better?

C. DISCUSSION, ANALYSIS AND EVALUATION (*ROLE PLAY OBSERVATION AND FEEDBACK*)

Following the cutting/stopping of the action, the teacher should firmly release the players from their roles and lead towards a discussion which analyses the action and quickly attempts to pinpoint the key feature of the feelings of the players as well as examining important pieces of dialogues and action. It is important to try to seize these important emotive insights as soon as possible; all too frequently the members of the group will slip into other roles such as "critic", 'analyst", "deprecator", as they adopt the mental

posture of a discussion group. Later the facts, principles, causes and effects can be discussed, and a thorough reinforcement of the learning situation can be undertaken.

It is important in this final phase that the perception of the group (not least the teacher) should be turned towards the educational objectives of the exercise and towards the formulation or suggestion for action or follow up.

The discussion and analysis of the role playing situation depends upon how well the audiences are involved. Key questions may be asked by the leader and/or buzz groups may be formed. All members of the group (actors and the audience) should participate, and the reactions of the actors may be profitably compared to those of the audience. The audience is just as much involved in the learning situation as the actors are. In the analysis and discussion time, the audience should provide possible solutions to the realistic problem situations which surface.

It is important to evaluate role playing in the light of the prescribed goals. Evaluation should proceed on group and personal levels, raising questions concerning the validity of the original purpose.

D. FEEDBACK

The language of feedback is also very important. Feedback should broadly follow SMART principle (Specific, Measurable, Achievable, Realistic and Time-bound). Role play feedback should describe specific things that the observer saw and heard, relevant to the exercise and to the person(s) doing the role playing. Role play feedback should not contain subjective judgments or comments based on personal knowledge or assumptions.

Feedback needs to be specific, relevant, achievable and immediate.. The group/class should share in the defining of problem, carrying out the role playing situation, discussing the results, and evaluating the whole experience.

WAYS OF IMPROVING THE METHOD

1. The teacher/producer frequently overestimates the length of time during which the roles and situation can be sustained. Even where all members of the group are actually playing roles (i.e. no audience) it is unwise to continue "in role" for longer than one hour.

2. When introducing role playing, it is helpful to have the teacher

take a part as an actor in the initial role play in order to get things off to a good start.

3. Keep initial role plays short. One or two minutes are generally sufficient for making key points.

4. Initial role plays work best if there are no more than two or three actors.

5. Because of psychological background, research is needed to determine what sort of people, kind of topic, purpose and situations lend themselves to role play's effective use, and to determine more precisely just what are the significant and effective factors in the role-play.

10. EXPERIMENTATION

DEFINITION:

Experimentation is a method of learning using carefully controlled tests or trials in order to gain knowledge or confirm a claim.

TYPES OF EXPERIMENTATION METHODS

1. Laboratory experimentation.
2. Field experimentation.
3. Natural experimentation.

Lab experimentation:

This is carried out within the confines of a room designed as a laboratory where there is precise control of variables (i.e.) independent variable is manipulated to control dependent variable.

Field experimentation:

This is carried out in more natural setting for example in the field where plants species are used as variables. Just like in the lab experiment, the independent variable is deliberately manipulated by the person doing the experiment though there is no tight control over the variables e.g. when a trial is being done on people with HIV/AIDS by giving them a new drug and observing them for a given time to see their response to the drug.

Natural Experiment:

An example is if a decision is made for experimental purpose in a particular hospital to have mixed patient wards rather than the usual separate wards for men and women. The effects on patients in

these wards could be compared with those in single wards.
However this may not reflect real experimental case because one is not able to manipulate variables but might fulfill the objective set.

APPROPRIATE SITUATIONS

1. If the learners are required to absorb skills and knowledge from what they have performed.
2. If there is enough materials and instruments for each learner.
3. If the experiment being undertaken can not endanger the life of the learners.
4. When learners are required to discover and explore new ideas on their own.
5. When the learners have enough experience to handle dangerous chemicals independently.

INAPPROPRIATE SITUATIONS:

1. If the materials and equipment are not adequate.
2. If learners are inexperienced to handle dangerous chemicals.
3. When the experiment can not be done on human beings due to ethnical limitation.
4. If the experiment is going to be too expensive to sustain.

ADVANTAGES:

1. It facilitates acquisition of practical skills.
2. It is a hand on task where one learns by doing which enhances retention of knowledge.
3. It facilitates active learning process rather than passive.
4. Learners familiarize on how to use tools or operate equipment.
5. Learners develop team spirit by working together.
6. The curiosity and inquisitive instincts of learners is satisfied.
7. It nurtures a culture of independence, self reliance, innovation, discovery and knowledge creation.
8. It helps learners practice how to use primary source of knowledge, make observations, and gather information and record data.
9. It provides a learner centered approach to learning.

10. DISADVANTAGES

1. Some experiments may be dangerous (e.g.) use of dangerous materials and procedures.

2. Slow learners may not be able to finish the experiment within the assigned period.
3. When gathering data in the field some study subjects may be uncooperative while others may provide false information.
4. It is an expensive exercise, therefore equipments, materials required, may be inadequate in resource poor settings.
5. It has an element of artificiality (i.e.) what happens in a test tube may not be a mirror image of what happens in a living system.
6. There are cases where one is not able to get a representative sample.
7. It may lead to invalid conclusion when it is not possible to control all variables.
8. It may not be possible to carry out certain procedures because of ethical considerations.

PREPARATION:

1. The teacher completes a request form for practical and presents it to the technician in charge of the laboratory. This should be done at least 2 weeks in advance.

The request form provides for the following information:-

- a) Date when the experiment will be carried out.
- b) The particular laboratory to be used.
- c) The subject and title of the experiment.
- d) The number of learners.
- e) Description and quantity of materials required.
- f) Description and number of apparatus required.
- g) Description and number of equipment required.

2. The teacher prepares instructions sheet and gives a copy to each learner in advance.

The instructions sheet contains the following information:

- a) Title of the experiment.
- b) Material, reagents, chemicals, apparatus and equipment to be used in the experiment.
- c) Procedure to be used when carrying out the experiment.
- d) Precautions to be taken when doing the experiment.

3. The technician makes the following preparations

- a) Prepares the apparatus to be used.
- b) Obtains the chemicals required.
- c) He sources other materials to be used.
- d) He ensures that tools and equipments are available and in good working condition.
- e) Prepares reagents required.
- f) He ensures that the laboratory and the benches are clean and ready for use.
- g) He ensures that the laboratory is well ventilated and fume hood is available if fumes are expected during the experiment.
- h) He ensures that electric power, gas, compressed air and water are available if the experiment requires their use.
4. (a) The chemicals, reagents and other materials are placed in the preparation room.
- (b) The teacher performs the experiment in advance in order to identify bottlenecks and to know how long the experiment is likely to take.
5. On the day when the experiment is carried out, the following takes place.
 - a) The teacher ensures that all the learners are in their protective clothing (i.e.). Gloves, lab coats etc. before the start of the experiment.
 - b) The technician transfers the items required for the experiment from the preparation room to the laboratory and places them in strategic positions.

The technician is required to stay within reach during the experiment period so that he may handle difficulties that might arise and also replenish any materials, chemicals and reagents if need be.

PRESENTATION:

1. The teacher gives a brief theoretical background on what the experiment is based, he explains to the learners the purpose and objectives of the experiment, activities which shall be undertaken during the experimental exercise, the observations to be made and the type of report to be submitted after completion of the experiment.
2. The teacher may use teaching aids such as charts, over

head projector etc to show the students what they are supposed to do.

3. The teacher demonstrates to the students how the experiment is to be performed.
4. The teacher confirms that all the learners have instructions sheet.
5. After the teacher is confident that the students are well prepared to carry out experiment, he divides them in groups and assigns them work station.
6. When the students are in progress, the teacher supervises them and responds to any difficulties that might arise.

At the end of the experiment the teacher instructs the students to clean up their work stations and switch off the equipments they were using. He informs the students when they should hand in their reports and dismisses the class. The teacher ensures that all the students have left the lab and that everything is in order before leaving the laboratory.

WAYS OF IMPROVING THE METHOD.

1. Note down any accidents which occur during the experiment and put in place measures which may prevent or minimize such accidents in the future, the measures to be taken may include:
 - Modification of the procedure.
 - Installation of safety equipment (e.g.) fire extinguishers, safety showers, hoods, eye wash stations and first aid kits.
2. Make sure that the fire extinguishers and first aid kits are in working condition.
3. Purchase standard equipment and adequate quantity of materials apparatus to avoid unnecessary improvisation.
4. Have a regular schedule for maintenance and calibration of instruments.
5. Hire competent technician/s on a full time basis to maintain the lab.
6. Construct standard labs with adequate space to avoid overcrowding.

7. Avoid over enrollment of students in lab classes so that experiments can be done in one session and not in shifts.
8. Laboratories should not be used as classrooms.
9. Construct enough laboratories and designate them according to subject area. For example a laboratory intended for chemistry should be distinct from that of physics and biology.
10. Avoid movement of equipment from one laboratory to another.
11. Designate secure areas within the lab for storage of unfinished students' projects.
12. Students with long hair should be advised to tie it up.
13. Safety goggles/ masks should be provided in the lab.
14. Students should be provided with lockers in the lab where they can keep their personal belongings required for lab work. The lockers should have combination locks.
15. The lab should be well stocked with frequently used chemicals and reagents.
16. Standard forms should be provided for booking lab sessions and indicating type and quantity of equipments and reagents which will be needed for the experiments.
17. Students should be drilled on lab safety procedures before going to the lab for the experiment.
18. Order materials of good quality from reputable suppliers.
19. The labs should be under lock and key when not in use to ensure safety of the equipment.

11. PROGRAMMED INSTRUCTION

DEFINITION

Programmed instruction is a method of presenting new subject mater to students in a graded sequence of controlled steps.

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Students work through the programmed material by themselves at their own speed and after each step, test their comprehension by answering an examination question or filling in a diagram. They are then immediately shown the correct answer or given additional information. Computers and other types of teaching machines are often used to present the material, although books may also be used.

TYPES OF PROGRAMMED INSTRUCTION

(a) Programmed Textbook

This may be described simply as a self-instructional textbook. More fully, it is a written program in which the subject matter has been broken into minute details of the learning sequence. The program is written as a series of easily answered questions that lead the student to logical conclusions foreseen by the programmer. The student reads the questions or “frame” and fills in his answer. He then checks his answer against the correct answer, which is given either on the same page or on a designated page. This immediate knowledge of results reinforces learning as well as reducing the possibility of fixation of errors.

(b) Teaching machines

Teaching machines are mechanical or electronic devices for presenting auto-instructional materials and, as such, are also as means of individualizing the instruction. The effectiveness of any teaching machine depends on the material used in it. There are no experimental data to show that a teaching machine is more efficient than a programmed textbook. The machine itself does not teach but provides the students with the skillful teaching of the program writer or writers.

A well-designed teaching machine controls the part of the program the student is responding to by exposing only a small segment of the lesson at a time. The simpler machines use printed materials only; the more complex machines use diagrams, slides, film strips, programs and variety of other teaching aids. Discs, cards, or tapes are used to present the frames in a machine.

As programming technology developed, so did the range of teaching machines and other programmed instruction materials. Programs

have been devised for the teaching of spelling, reading, arithmetic, foreign languages, physics, psychology and a number of other subjects. Some programs are linear in concept, allowing advancement only in particular order as the correct answer is given. Others are branching, giving additional information at the appropriate level whether a correct or incorrect answer is given. Computer-assisted instruction, which both tests students' abilities and their marks progress, may supplement classroom activity or help students to develop ideas and skills independently.

APPROPRIATE SITUATIONS

- i. When the classroom contains both slow and fast learners. This enables each learner to move at their speed or pace.
- ii. Where there is a shortage of teachers and availability of teachings machines and textbooks.
- iii. When the machines and textbooks are available and the learners have advance knowledge to use them.

INAPPROPRIATE SITUATIONS

- i. When a given unit or topic is to be covered within a specific period, the slow learners will drag behind because they will not have finished the topic by the end of the set period.
- ii. When the machines and textbooks are unavailable or the learners don't have prior knowledge on how to use them.

ADVANTAGES OF PROGRAMMED INSTRUCTION METHOD

- i. Self-paced learning- the learner can proceed at their own pace, hence intrinsic motivation.
- ii. Teaching machines enable learners to work individually, calling for active participation of the learner.
- iii. Computer-assisted instructions, which tests learners' abilities, marks their progress, and helps them to develop ideas and skills independently.
- iv. With programmed instruction method, all learning steps are covered leaving no chance of jumping some crucial steps. This is very important in building on the previously acquired ideas and knowledge.

DISADVANTAGES

Learners may require extra explanation if some content is not grasped.

- i. Over-use of small steps leads to boredom on the part of the learners.
- ii. Difficult for the teacher to review.
- iii. The tendency of learners not retaining what had been learnt if they did not write these responses to a program's frames.
- iv. Requires an expert to develop the program, hence costly. Textbooks e.g. Malkiat Singh sources for experts in the area of writing.
- v. Learners tend to feel they are wasting time.

PREPARATION AND PRESENTATION

Preparation – Selecting Programmed Materials

Preparation involves organizing the learning activities to meet the needs of the learner. Programmed materials are primarily self-instructional. They may be verbal or non-verbal materials or a combination of these, and are useful at many levels of learning. They may be in form of programmed textbooks, bound like conventional textbooks, or in a mechanical/electronic device called a teaching machine. No formal criteria for selecting and evaluating programmed materials have been identified, but the criteria must be concerned with the content and the quality of the program. Here are some specific guidelines for selecting and evaluating programmed materials:

- i. The content of the program is evaluated by subject matter specialists in order to determine the feasibility of its being programmed. Should be clear and time saving. Is the material subject to rapid change? If so, continual revision of the program will negate its usefulness. Can the program be produced in one program of reasonable length, or will it be separated into a series of programs? Is a student forced to work through a program or a series of programs? A student forced to work through a program that has a reading time of longer than one hour may lose interest.

- ii. The overall behavioral objectives of the particular subject should be reviewed as they relate to the program itself.
- iii. The teacher using the program should study it frame by frame to decide whether or not the knowledge and skills relevant to the curriculum goals will be taught
- iv. The basic concepts in the program to be taught should be clearly identifiable as should the concepts in each unit of the program.
- v. A number of learners at the level for which the program has been written should go through it and subsequently be tested in order to measure to what extent the program does the teaching job which it is supposed to do.

WRITING A PROGRAM

The writing of a short programmed course should be required of every teacher who uses this new instructional medium in his/her classroom. This experience will show why clearly defined behavioral objectives are imperative in good teaching and will underline the need for specificity when teaching in any subject with any medium. This is a much more difficult assignment for the average person than the writing of a book.

Certain basic facts should be kept in mind and observed when beginning to write a minigram (a brief program). First and foremost, the programmer should never assume too much knowledge on the part of the learner. Next, the minigram should completely cover the topic for which it is being written. Then, new terms, concepts, and principles taught in a programme should be supplemented by frames providing practice and a certain amount of recapitulation. One other point that is often overlooked by the inexperienced writer of programs is to have each teaching frame designed so as to teach only one new thing. Successful instruction with programmed materials is related closely to the small sequential steps by which it proceeds. Consequently, a writer of programs should, as a rule, avoid presenting two new facts in a frame as this creates

unnecessary complexities in following the sequential steps. Review frames should be designed to help the learner recapitulate periodically what he has been learning.

In constructing a frame, the first thing to do is to select the response desired. Then the appropriate cues and suitable context for evoking the response must be chosen. Frames should be carefully sequenced steps, but not be so constructed that they are dependent upon others; frames which are independent in structure are marks of a well-designed program.

PRESENTATION

The learning materials are presented in form of frames. One frame is presented at a time and the learner operating the machine brings each frame into view as it is needed. The machine tends to make cheating more difficult than does the textbooks, for the learner's response generally must be made before the correct response becomes visible. This control is usually accomplished by having the learner's response move into a covered but transparent box so that it can be seen but cannot be changed once the correct response is seen.

WAYS OF IMPROVING THE METHOD

- The program should give a summary of what has been learnt before moving to the next frame so that the learner is given a chance of recapturing the contents of the frame and even putting them down in form of short notes for further reference.
- Teachers who anticipate teaching this new medium should have personal experience in studying programmes courses.
- To improve the method requires both expert in the learning problems associated with a specific topic and experts in the development of expert-based systems. Thus an effective "expert teacher" of e.g. digital electronics would be created by the cooperative effort of an:
 - o Expert in the content of digital electronics
 - o Expert in the teaching of digital electronics
 - o Expert in the design of expert teaching designs

12. DISCUSSION GROUP METHOD

This is a learner centered strategy of instruction where the teacher plays a mediating role. In discussion, interactive class participation is the norm. A discussion seeks and examines a matter by means of a free flow of argument.

Discussions are not easy to prepare or control.

It requires a skilled teacher who should understand the rationale of the discussion and its teachings.

He should also understand the concept and basis of forming groups, how the group members are expected to interact, and the effect of individual differences, the ability and expectation on the group as a whole.

He should understand the nature of participation in discussion, the value of reciprocal influence among learners in the facilitation of learning, the difference between overseeing, controlling and dominating a discussion.

VALUE OF THE DISCUSSION GROUP

The purpose of a discussion group is usually the collective explanation and evaluation of ideas.

ADVANTAGES

- Heightens learner's interest
- Builds participants understanding for the topic in question
- Members pool knowledge and ideas in the cooperative task of endeavoring to understand a problem by learning from one another.
- Allows a two way communication
- People tend to work more intensely while in a group
- Group judgments may sometimes be accurate than those resulting from individual examinations of problems.
- Conflicts/ disagreement which emerge in a heated discussion group may be starting points for critical thinking and new exploration.

- Leads to increased tolerance of varying points of view.
- Enables a class and teachers to know one another thoughts, opinions and attitudes
- Provides for the teacher a useful feedback, where the discussion has centered on the content of previous lessons.
- Has positive effect on communication and problems solving skills.

DISADVANTAGES OF DISCUSSION GROUP

- Unless the topic is carefully chosen and the session structured and controlled the discussion may degenerate into an informal debate from which a dominant hierarchy of star speakers emerge.
- This leads to more forceful members holding the floor while others become silent observers, which negates the very purpose for the discussion.
- Because some members are readily dominated, false conclusions, presentation in a persuasive manner by a member on whom the group over-depends may be accepted too easily.
- A discussion may deteriorate into forum for the exchange of prejudices, so that it resembles an athletic contest with closed mind.
- Since discussion is less structured and certain than lecturing it may provoke anxiety in predisposed learners and interfere with their learning.

PREPARATION FOR THE DISCUSSION

The teacher should understand why discussion is the most appropriate mode of instruction by examining the following questions:

- Topic to be discussed.
- Has the course reached a stage where collective examination of a problem is essential?
- Can the objective be attained by any other form of instruction?

- What is the aim of the discussion?
- What is the learner expected to accomplish?
- What resource will be made available to them?

The teacher should ensure;

- there is a clear objective
- learners have prerequisite knowledge of the element of the
- Unity of purpose of the group
- Group members prepare short items to be used for the discussion.
- He gives topics to be discussed to the group plus guiding questions
- A secretary is appointed and given the task of noting the contributions of the discussion group.
- Seating arrangement is planned so as facilitate organized conversation which typifies a good discussion group.
 - Where a class is too large, “fish bow” technique may be used. This allows a small group discussion, with the remainder of the class viewing and listening, or a “jigsaw” discussion which allows a topic to be broken down into segments where each segment discusses and later meet in plenary session to fit together their finding.

CONTROLLING THE DISCUSSION

- The subtle art of discussion control depends on the teacher’s awareness of the purpose of the discussion
- He should ensure all members feel free to contribute
- Members’ participation shouldn’t be constrained by over-rigid rules, but some rules are necessary to prevent the discussion turning to mere gossip.
- Dominant personalities must not be allowed to take over the discussion; all must be encouraged to contribute.
- The teacher should pose appropriate and stimulating question as apart of the discussion
- Deliberate intervention must not become an excuse for the teacher taking over the discussion.

SETTING AND KEEPING THE DISCUSSION IN MOTION

- Immediately the first question has been posed, it becomes the task of the group leader to initiate and encourage the expression of varying points of view and to clarify goals.
- The discussion ought to move around the circle of participants, briskly and pointedly.
- Faulty reasoning and circular argument should be discouraged.
- Hidden agendas' should be exposed.
- Obscure statements should be clarified.
- Sweeping generalization should be subjected to close examination.
- Interruptions and irrelevances ought to be met with tactful rejoinder, which does not terminate the discussion.
- Occasional summaries of arguments and matters on which there is general agreement should be given and recorded.
- Difference of opinion should be mediated and clarified.
- Respect for all group members should be encouraged.
- The leader should avoid the type of overall control which inhibits discussion as members feel manipulated to reach a pre-determined conclusion
- A momentary silence should not be mistaken as a sign that discussion is flagging, it may indicate a prelude to an empowerment in the quality to the discussion

ENDING THE DISCUSSION

- Intermediate summing up and recapitulation should occur at several stages of the discussion

13. E-LEARNING

WHAT IS E- LEARNING

E – Learning can be a confusing topic in part because of the

alphabet group of acronyms, technology related buzzwords, overlapping definitions, variety of delivery options and the converging histories of the two disciplines of technology and training. In the current market place, what most people really mean when they use the term e-learning (and its multiple synonyms) is Web-based training – but it really means much more.

E-Learning is really nothing more than using some form of technology to deliver training and other educational materials

E-Learning is the latest, in vogue, all-inclusive term for training delivered by a number of means. In the past, these have included the use of mainframe computers, floppy diskettes, multimedia CD-ROMs, and interactive videodisks. Most recently, web technology (both internet and intranet delivery) have become preferred delivery options. In the near future, e-learning will also include delivering on PDA'S (e.g. palm pilots) and even via wireless devices like your cell phone. This new, mobile form of education is called predictably enough m- learning.

OTHER TERMS ASSOCIATED WITH E LEARNING

Understanding what is and what isn't e-learning can be confusing due to the wealth of different terms that exist to define the same thing. Most people prefer the word e-learning to training ("dogs are trained, people learn") and use technology – based learning (TBL) or e-learning" instead of technology – based training (TBT)

Other commonly used terms include computer – based training (CBT), computer – based learning (CBL) computer – based instruction (CBI), computer – based education (CBE), Web- based training (WBT), internet-based training (IBT), and any number of others. Some of these, notable computer – based training are less specific.

Other confusion arises from technical definitions that differ from their popular use. For example, the terms CBT, CBI and CBL are sometimes used generically to refer to all types of e-learning but are commonly used to describe older disk – based training.

A term beginning with the word computer frequently, but not always, refers to interactive tutorials that are distributed on floppy diskettes.

The term multimedia training is usually used to describe training delivered via CD-ROM. This rule of thumb is complicated by the fact that advances in internet technology make it possible for Network-based training to now deliver audio and video element as well.

Browser – based training is the term used to describe courseware that requires a Web browser to access, but may in fact be running from the Internet or CD – ROM. In fact, some training programs will pull content from both a Web site as well as a CD –ROM. These courses are sometime called hybrid – CD-ROMS.

Distance learning or distance education, are other commonly used terms. They accurately describe most types of e-learning but are most often used to describe instructor- led, web-based education for either corporate training or college classes.

To further complicate matters, some theorists divide e-learning into three distinct branches: computer – aided instruction (CAI), computer managed instruction (CMI), and computer supported learning resources (CSLR). The first term, CAI encompasses the portion of a given e-learning product that provides the instructions, such as the tutorials, simulations and exercises. The second term, CMI refers to the testing, recorded keeping and study guidance functions of an e-learning product. The last term, CSLR, encompasses the communication, database and performance support aspect of e-learning. Although these distinct can prove useful in academic research and discussion, it is enough for most of us to know that they exist and that they all refer to parts of the greater whole, e-learning.

Finally, when it comes to course and student management, the newest descriptor is learning management system (LMS). 'LMS' are typically web-design programs that are used to enroll students, assign and launch courses, and tackle student progress and test scores. A close cousin to the LMS is the LCMS which stands for learning content management system. LCMS manages chunks of reusable learning objects (RLOS).

For more detailed definitions of the ever changing jargon of e-

learning visit The World's biggest e-learning Glossary.

TABLE 1

THE FOUR TYPES OF E-LEARNING

E-learning application falls into four major categories, as shown in the table below.

CATEGORY	WHAT THE LEARNER WILL DO	TRACKING NEEDED
Broadcast of new information	Read	None
Important knowledge transfer	Read, listen, answer question	Who took this?
Developing new skills	Read, listen, try new skills	How much did they learn? What were their scores?
Certifying competencies	Read, listen, try new skills, and pass certification.	Are they certified?

Depending on your business need, any given problem may be solved using one or more of these four models. If you are just informing people the first two models work fine. If you really need to make sure everyone understands the new pricing (e.g. because it will impact sales revenue or profitability) you can cost justify the third or fourth category.

These four categories of e-learning differ in several ways. They use different media, have different tracking requirements and achieve different results. But the biggest difference between the four models is the time and expense needed to build content.

ADVANTAGES OF E-LEARNING

- **The 4A's of e-learning – *anytime, any place any pace, any subject*.** e-learning materials can be accessed at the most convenient time for the learner, if the course material is well constructed then learning can take place in short segments and be customized to suit the learner's needs.
- **Empowerment;** learners are in charge of their own learning.
- **Flexibility:** e-learning material can be accessed in a non-sequential way, enabling a learner to navigate content in different ways or obtain a global view before tackling the details of individual units.
- **Cost effective:** large numbers of learners can have access to the same materials but can be supported by peer-to-peer or learner -to-tutor support services thus reducing the cost of delivery.
- **Up-to-date content:** course content is located in one place so it can be easily updated and can provide direct. Links to supporting materials such as internet and library resources.
- **Tailoring learning:** the time needed to learn a particular topic or skill is reduced or “compressed” as learning can be modified to suit the user's needs and requirement. E-learning can provide a variety of learning experiences including interactive elements.
- **Retainable;** the smaller and more relevant the learning the easier it is to capture and remember.
- **Socio-inclusive:** students can learn in a relatively anonymous environment without the embarrassment of failure and /or socio-culture bias from personal contact.
- **Interactive:** well constructed materials have elements of interactivity through simulations etc which will underpin and enforce the learning.
- **Collaborative:** the use of groups and teams working together in collaborative learning and learner-learner interaction enforces employability skills.
- **Used to track student performance:** student usage of the

materials can be monitored and early potential drop –out can be detected and given remedial support.

- **Used to facilitate understanding:** of concepts by offering alternative ways of visualizing materials and alternative explanations to those given in single delivery mode such as a lecture, seminar or tutorial (for example, multimedia and (hypermedia)
- **Used to give instant feedback:** from online self assessment or formative assessment particularly through multiple choice question formats.
- **Used for assessment:** students can be offered automatically marked self assessment exercises to identify skill/knowledge levels and learning needs before engaging with course content.
- **Used to assist student with certain disabilities;** access for student with hearing and some physical disabilities may be enhanced.

BENEFITS AND DRAWBACKS OF E-LEARNING

According to **KEVIN KRUSE**, the vast movement towards e-learning is clearly motivated by the many benefits it offers. However much e-learning is praised and innovated, computer will never completely eliminate human instructors and other forms of educational delivery. What is important to know is exactly what e-learning advantages exist and whether they outweigh the limitations of the medium.

FEATURES UNIQUE TO E-LEARNING

- Like no other training form, e-learning promises to provide a single experience that accommodates the three distinct learning styles of auditory learners, visual learners and kinesthetic learners.
- Other unique opportunities created by the advent and development of e-learning are more efficient training of a globally dispersed audience.
- It also has reduced publishing and distribution costs.
- E – Learning also offers individualized instruction which print media cannot provide and instructor-led courses allow clumsily and at greater cost.
- In conjunction with assessing needs, E-learning can target

individual learning preferences.

- Additionally, synchronous e-learning is self paced. Advanced e-learners are allowed to speed through or bypass instruction that is redundant while novices slow their own progress through content, eliminating frustrations with themselves, their fellow learners and the course.
- In these ways e-learning is inclusive of a maximum number of participants with a maximum range of learning styles, preference and needs.

COLLABORATIVE LEARNING

All collaborative learning theory contends that human interaction is a vital ingredient to learning. Consideration of this is particularly crucial when designing e-learning, realizing the potential for the medium to isolate learners. With well – delivered synchronous distance education and technology like message boards, charts, e-mail and tele-conferencing, this potential bond between teacher and student and among the students themselves cannot be replicated through communication technology.

ADVANTAGES OF E-LEARNING TO THE TRAINER OR ORGANIZATION

Some of the most outstanding advantages to the trainer or organization are;-

- ***Reduced overall cost*** is the most influential factor in adopting e-learning. The elimination of costs associated with instructor's salaries, class room rentals, and student travel, lodging and meals are directly quantifiable. The reduction of time spend away from the job by employees may be the most positive offshoot.
- ***Learning times reduced*** at an average of 40 to 60 percent, as found by Brandon Hall (We –based Training Cookbook, 1997, P. 108)
- ***Increased retention and application*** to job averages and increase of 25 percent over traditional methods, according to an independent study by J.I) Fletcher (Multimedia Review, Spring 1991. pp 33-42)
- ***Consistent delivery of content*** is possible with asynchronous, self –paced e-learning.

- ***Expert knowledge is communicated***, but more importantly captured, with good e-learning and knowledge management systems.
- ***Proof of completion and certification***, essential elements for training initiatives can be automated

ADVANTAGES TO THE LEARNER

Along with the increased retention, reduced learning time and other aforementioned benefits to students, particular advantages of e-learning include:

- On – demand availability enables students to complete training conveniently at of-hours or from home.
- Self – spacing for slow or quick learners reduces stress and increases satisfaction.
- Interactivity engages users, pushing them rather pulling them through training
- Confidence that refresher or quick reference materials are available reduces burden of responsibility of mastery.

DISADVANTAGES TO THE TRAINER OR ORGANIZATION

e- Learning is not, however, the be all and end all, to every training need. It does have limitations, among them:

- Up-front investment required of an e-learning solution is large due to development costs. Budgets and cash flows will need to be negotiated.
- Technology issues that play a factor include whether the existing technology infrastructure can accomplish the training goals, whether additional technology expenditures can be justified and whether compatibility of all software and hardware can be achieved.
- Inappropriate content for e-learning may exist according to some experts, though are limited in number. Even the

acquisition of skills that involve complex physical / motor or emotional components (for example, juggling or mediation) can be augmented with e-learning.

- Cultural acceptance is an issue in organization where student's demographics and psychographics may predispose them against using computers at all, let alone for e-learning.

DISADVANTAGES TO THE LEARNER

The ways in which e-learning may not excel other training include:

- Technology issue of the learners are most commonly technophobia and unavailability of required technologies
- Portability of training has become strength of e-learning with the proliferation of network linking points, notebook computers, PDAs and mobile phones, but still does not rival that of printed workbooks are reference materials.
- Reduced social and cultural interaction can be a drawback. The impersonality, suppression of communication mechanisms such as body language and elimination of peer-to-peer learning that are part of this potential disadvantages are lessening with advances in communications technologies.

DO THE BENEFITS OUTWEIGH THE DRAWBACKS?

The pro's and con's of e-learning vary depending on program goals, target audience and organizational infrastructure and culture. But it is unarguable that e-learning is rapidly growing as a form of training delivery and most are finding that the clear benefits to e-learning will guarantee its role in their overall learning strategy.

14. TEAM TEACHING

Team teaching is an instructional technique where two members of staff decide to pool their efforts in pursuit of one or more specific teaching objectives.

The idea of team teaching originated in the USA.

It is said to operate where two or more teachers cooperate, deliberately and methodically, in the planning, presentation and evaluation of the teaching process.

In effect, individual teachers sacrifice their autonomy, pool their resource and accept joint responsibility for the teaching of groups of learners.

In team teaching, of vital importance is the team's conscious unity of purpose. No matter how well organized the team or how abundant the resources and teaching aids, the chances of the team's success will depend directly on the real cooperation of its members.

Team teaching makes use of many modes of instructional technologies such as discussion, lecture, individual study, group project etc.

ADVANTAGES

- It uses the pooled, specialist intends of the team members in the best possible way.
- The responsibility for instruction of the course is shared among a number of specialists.
- It is possible for members of the team to learn from one another.

DISADVANTAGES

- Demands on staff are much heavier than those of the conventional teaching situation.
- The special arrangements of teaching space necessitated by team teaching present may problems.
- Resource necessary for team teaching may be beyond the budget of many institutions.
- It also poses challenges related to timetable construction
- Problems may arise from teaching teams due to interpersonal strains and a general incompatibility of some members of staff.
- Teachers, no longer enjoy total autonomy in their classrooms.
- Team teaching may be unproductive in some subject areas i.e. in mathematics



ACTIVITY

1. *Discuss the appropriate situations for the method.*
2. *Discuss the inappropriate situations for the method.*
3. *How can the method be improved?*

15. THE SEMINAR METHOD

- Seminar method of teaching refers to a semi -structured group discussion involving mature learners. It may proceed or follow a formal lecture or a series of lessons.
- In general, it's appropriate as mode of instruction only when the level of attainment of the group is relatively high and the subject matter lends itself to analytical treatment i.e. in presenting of a thesis.

ADVANTAGES

- The main advantage is its stimulation and testing of learners' power of comprehension and evaluation.
- Assist learners to think critically
- It's a valuable learning instrument in the cultivation of the art of judgment.

PREPARATION AND PRESENTATION OF SEMINAR

- Consider duration of the seminar to include time for

discussion

- Where possible a summary of the paper presented should be made available to learners 2 or 3 weeks in advance, it should include;
 - ✓ Full title of the paper
 - ✓ Abstract
 - ✓ Main headings and sub-headings
 - ✓ Sources teaching list, relevant statistics
- The presentation should be in summary form
- Visual aids may be necessary
- Seating arrangements should allow intercommunication.
- Where discussion results in criticism of the paper the presenter may be expected to claim, refute, rejoinder and reply.
- The conclusion of a seminar should provide a clear link with the selected section of the scheme of work



ACTIVITY

1. *Discuss the appropriate situations for the method.*
2. *Discuss the inappropriate situations for the method.*
3. *How can the method be improved?*

16. TUTORIAL METHOD

- Is a meeting between a teacher and a learner or a very small group of learners, characterized by discussions and or personal face of face teaching generally on the content of an essay or to the, material written by the learner.
- It's a mode of tuition intended to reinforce learning.
- It requires a very generous staff-learner ratio.
- It used in activities such as:

- ✓ Skills teaching groups
- ✓ Remedial working groups
- ✓ Supervision tutorials

ADVANTAGES

- The intensity of tutorial is provided by its very personal form.
- Provides valuable assistance to college students of all level

DISADVANTAGE

- Tutor must insist on small groups
- Time can easily be wasted during a tutorial
- Posing of questions by a tutor during a session tests to the full his competence as controller of instruction.
- Tutorial are too demanding for students attending further education courses



ACTIVITY

1. Discuss the appropriate situations for the method.
2. Discuss the inappropriate situations for the method.
3. How can the method be improved



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APPENDICES

A). SCHEMES OF WORK EVALUATION – CHECK LIST

NAME.....

ADM.....

- ☐ Schemes of work is prepared in a specific subject
- ☐ Listed topics and subtopics concur with syllabus
- ☐ Schemed work is complete (all weeks of the term considered)
- ☐ Period numbers indicated using cardinal system
- ☐ Lesson titles are short, precise and serve as summary of syllabus subtopics

- ☐ CATs and Exams are schemed for

Objectives are:-

- ☐ Learner centered; by the end of the lesson the learner should be able to...
- ☐ Behaviorally stated and measurable
- ☐ Specific and unambiguous
- ☐ Achievable/realistic
- ☐ Time bound
- ☐ Arranged in order of achievement.

Other
comments.....
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.....
.....
.....

Key points:-

- ☐ Each objective has corresponding key points
- ☐ Key points are neatly arranged in logical sequence
- ☐ Details are added to key points to give direction for further planning.

- ☐ Key points can serve as summary of content
- ☐ Quality of key points is good/to be improved

Additional
comments.....
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APPENDIX B) LESSON PLAN FORMAT				
NAME	LEVEL	NO. OF STUDENTS	DATE	TIME
INSTITUTION	CLASS		SUBJECT	
LESSON TITLE			WEEK	
SPECIFIC OBJECTIVES:				
TEACHING AIDS				
REFERENCES			Time estimate (min)	

PRESENTATION <u>Introduction</u>		
<u>Body/lesson development</u>		
<u>Summary</u> <u>Assignment</u>		
<u>Remarks</u>	Total time	

APPENDIX C) SCHEME OF WORK FORMAT

NAME:	LEVEL	NUMBER OF STUDENTS
INSTITUTION:	CLASS	DATE OF PREPARATION
SUBJECT:	TERM:	DATE OF REVISION

SYLLABUS TOPIC:

SUB-TOPIC:

Week	Period No.	Lesson Title	Objectives	Key points	Application/ Activities	Ref. & Aids	Remarks /Date taught

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