Training Manual

Lesson Planning
and
Instructional Methods

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&
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Lesson Planning and Instructional Methods

for

Academic Staff

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Preface

Human Resource Development of the University System is one of the statutory responsibilities of the University Grants Commission (UGC) and also a key component of the Higher Education for the Twenty First Century (HETC) Project (2011-2016), the second phase of World Bank assistance provided for higher education sector in Sri Lanka. The UGC being the apex body of the university system bears the responsibility of providing opportunities for growth and career development to as many as possible through in-service training. In-service training for all categories of staff is vitally important not only to impart specific knowledge and skills required to perform in the employee's assigned tasks but also to promote right attitudes and behavioral attributes such as allegiance, commitment, initiative, compliance with codes of practices and ethics, which are indispensible elements required for improving the productivity of employees and that of the entire system.

In executing its mandatory role, the UGC has established Staff Development Centers through the Commission Circulars No. 820 of 20th February 2003 and expanded and strengthened the role of SDCs through the UGC Circular 937 of 10th November 2010. The UGC is providing additional funds beginning from 2011 for improving physical and human resources and expanding the scope of continuing education programmes. This initiative has been assisted by the WB-HETC Project (2011-2015) commencing from 2011.The -HRD-ST sub-project under the direction of the Standing Committee on Staff Development of the UGC has developed a comprehensive programme aimed at human resources development of universities, covering academic and other staff (i.e. senior administrative staff, executive staff, technical staff, non-academic support staff, etc.).

The aim of the UGC-HETC joint endeavor is to design and develop a series of Training Programmes and Manuals on diverse topics relevant to the staff of higher management, academic, executive and non-academic categories. The Training programmes and manuals are developed by the identified resource persons in close liaison and consultation with Professor Harischandra Abeygunawardena, Chairman of the Standing Committee on Staff Development of the UGC and Dr. Gominda Ponnamperuma, Manager- HRD of the HETC Project. All manuals are approved by the UGC for the use in the Staff Development Centers of all Universities.

This Training Manual on **Lesson Planning and Instructional Methods for** was developed by **Prof. Deepthi C. Bandara and Dr. Heshan V. A. Wickramasuriya** as a commissioned assignment and would provide details of the prescribed training course. They will also act as training guides for prospective trainers of all universities.

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Introduction

The training program on Lesson Planning and Instructional Teaching Methods for Undergraduate Teaching presented in this manual is broad enough to address the training needs of the population of university educators who would be committed to train all academic staff of Universities in the endeavor of improving and enhancing the repertoire of undergraduate teaching to address the target population and societal needs of specific study programs. The curriculum of the program would also greatly benefit the effort to address the paradigm shift of teacher centered to learner-centered education and outcome-based education in our Universities.

The curriculum consists of the following modules

Module 1: Principles of Teaching and Learning

Module 2: Teaching Methods

Module 3: Classroom Teaching and Learning

Module 4: Facilitated and Independent Teaching and Learning

Each module is fashioned so that it contributes to develop an individual in his/her role as a university teacher. Each module compliments and reinforces the others.

The total program would be of 36 hrs duration. Each module is assigned a specific number of hrs which comprises time in face to face interaction. At the end of the modules in the program each participant will be expected to undertake a micro teaching session to the peer group which would receive peer and trainer evaluation.

All modules have a name, duration, prerequisites and co-requisites, aim, intended learning outcomes, assessment strategy, syllabus and suggested reading so that it facilitates the instructor and the participant to use the manual optimally. Each module comprises several topics. Each topic contains aims, learning outcomes, learning resources, lesson plan and content, activities, and assessment. Further, many topic contains supplementary reading notes, which explicate the content outline of a given topic with excerpts from further reading.

While the training manual would definitely assist Staff Development Centers of all Universities to conduct its training program, Universities could always use it as a guideline to modify/refine their own programs accordingly.

Module Abbreviations

Under 'Lesson Content and Methods' abbreviations have been used for both Teaching and Learning Methods (T &L Md.) and Teaching / Learning Resources (TLR). The abbreviations used are listed below.

Abbreviation	Term
As	Assignment
BS	Brainstorm
Dn	Discussion
GpA	Group Activity
GpAs	Group Assignment
GpDn	Group Discussion
GpPrsn	Group Presentation
IN	Individual Noting
MD	Model Development
Ob	Observation
Prsn	Presentation
Q & A	Question & Answer
SR	Silent Reflection
TA	TraineeActivity
TRd	Trainee Reading
TRdL	Trainee Reading Later
TS	Trainees' Sharing
TSm	Trainee Summary
VE	Verbal Explanation
Vi E	Visual Explanation
VS	Verbal Summary

Teaching Resources

Abbreviation	***Term***
BT	*Blu Tack*
Cds	*Cards*
CS	*Case Study*
HO	*Hand Out*
MM	*Multi-media projector*
Pens	*Marker pens*
WB	*White Board (including pens, and eraser)*

Lesson Planning and Instructional Teaching Methods
for
Undergraduate Teaching

1	Module Title	Module 1:Principles of Teaching and Learning
2	**Module Duration**	6 hrs and 15 min (375 minutes)
3	**Prerequisites and Co-requisites**	Engage in teaching (e.g. conduct lessons in theory and practical) for undergraduate study programs
4	**Module Aims**	To teach the principles of the theoretical framework of education, so that participants will be able to use them in planning lessons effectively to suit their teaching/learning situation.
5	**Objectives and Learning Outcomes**	• Identify the training needs and target populations • Determine learning styles and trainee/student profiles • Identify the significance of instruction and catering to different learning styles when teaching • Determine the domains of learning • Set clear learning outcomes for a teaching session • Plan lessons, courses and study programs for effective and efficient delivery
6	**Assessment Strategy**	One or a mix of Assignments and/or Portfolio
7	**Syllabus**	• Training Needs and Target Populations • Domains of learning and Learning Outcomes • Student profiles • Learning Styles and Learning Theories • Aims, Objectives and Intended Learning Outcomes • Lesson Planning

1. **Aim :** To teach the principles and practice of teaching and learning so that teachers in higher education would plan and conduct their teaching activities to effectively and efficiently bring about learning in their target populations

2. **Learning Outcomes:** Participants would be able to

    - Identify the characteristics of target populations and the significance of these in teaching/learning
    - Determine the training needs for different target populations
    - Determine the levels of teaching and learning
    - Determine student profiles and different learning styles
    - Plan and deliver lessons effectively to any target population

3. **Duration:** 75 minutes
4. **Teaching / Learning Resources:**
    - Faculty Prospectus
    - Student Handbook
    - Study Program Curriculum
    - Faculty graduate profile

5. **Lesson Content and Methods:**

No.	Content Outline	Teaching and Learning Method	Time (min)
1.1	What is a target population? • The people we teach and train are our target population/group Name the two most important aspects that should be considered when addressing a particular target population. • What you teach • How you teach List the characteristics of a target population that would be important to consider in relation to training	Question and Answer Brain storming Discussion Individual and group work	15

	• level of education • previous knowledge of subject • hands on experience of members • group size • age • attitudes • gender • cultural background • motivation • diversity of group • health/disabilities • training needs • social background • pace of learning Factors to be considered in the "What" and "How" to teach • The *level* at which the subject should be presented • Previous practical experience and knowledge • Personal background • Educational record • Motivation The *speed* at which instruction can best be given • Grasping new ideas • Material assimilation per session The most effective *Training Methods* to use • The lecture (formal) approach • Informal methods • Group work The *Technical Terms* to be used • Understanding of big words and 'jargon'	Demonstration	

1.2	What is a need? A need is a requirement which arises when the current situation/conditions/abilities etc. do not provide the optimal output/satisfaction/outcome etc. What is a training need? In our context of higher education then, a training need arises when there is a gap between the current performance and the desired performance. When a need arises it should be • significant • measurable • correctable Identify the training need for a teacher in the higher education system to attend a workshop on Lesson Planning and Instructional Teaching Methods – if you were to answer this question what would your reasons be and how would you state the requirements for training needs The process of identifying training needs a. define gaps between current and desired performance b. identify causes and possible solutions c. reduce time, effort and money d. foundation for instructional design e. align with instructional goal/s Factors influencing the training need identification Training need identification is time and location specific. Therefore it is a dynamic process and the factors influencing the needs would be quite fluid. At this point of time it would be good if factors which would influence the training need identification in a study program you contribute to can be identified. Why should training needs be identified? Since it takes considerable effort and time to identify training needs one would question as to	Question and Answer Verbal exposition Individual work Group work Discussion Discussion	15

	why it should be done in the first place. Consider the question as to what would happen if they were not identified. We need to remember that when a student is admitted to a University as teachers of higher education we have an obligation to guide him in a chosen path or discipline and to make sure that a predetermined graduate profile has to be achieved after a specified period of time duration in the University. Exercise • Identify the training need of your faculty • Identify the training need of your discipline • Analyze the training need of your discipline	Individual and group work	
1.3	1.3.1 Domains of Learning At any stage in education whether formal or informal, one would traverse three domains of learning. These as classified by Bloom (1956) are • Cognitive - knowledge • Psychomotor - skills • Affective - attitudes Learning in each of these domains would be hierarchical. When learning has occurred it should be observable and hence are known as learning outcomes. Thus learning outcomes would be stated as action verbs in all 3 domains. Below is a diagram which depicts the learning hierarchy in the cognitive domain by Bloom and colleagues. Similarly there are hierarchical classifications for the 'psychomotor' (i.e. skills) and 'affective' (i.e. attitudes) domains available. We will be discussing these in detail in another lesson later.	Verbal exposition Brain storming Discussion Buzz groups	15

1.4	Trainee/ Student Profiles As discussed in the section on target populations, the audience participating in a teaching/learning scenario would comprise a range of participant/student profiles What is a trainee/student profile? The characteristics of a trainee/student which is of significance and should be considered when determining the teaching/learning strategies to bring about the expected outcomes in a graduate profile. Why are trainee/student profiles important? Since the target population would comprise different trainee profiles it is very important that the trainer is aware of these profiles so that he/she can select the most appropriate teaching/training strategies for a particular scenario to improve the profiles of all trainees to the expected standard/s Write 5 characters you would include in a student profile for your discipline. How would you grade a student profile? What factors would you consider to improve a student profile? How would you use them?	Brain storming Question and Answer Discussion	15
1.5	1.5.1 Need for Planning Lessons Since all lessons in a course and all courses in a study program contribute to a final outcome of the graduate profile it is imperative that planning is a fundamental aspect of successful teaching and learning. Hence each lesson should be carefully planned to achieve its intended learning outcomes and the overall intended learning outcomes of the course. There are many aspects in a lesson which would have to be considered during planning and these would be dealt with at a later stage in this manual.	Verbal exposition Discussion Question and Answer	15

6. **Assessments:** Short assignments would be undertaken by participants for each of the sub topics during the face to face sessions as well as after sessions individually

7. **Suggested Reading:**

Training needs analysis - Wikipedia, the free encyclopedia

http://www.en.wikipedia.org/wiki/Training_needs_analysis Cached - Similar

Block all en.wikipedia.org results

Training Analysis (sometimes called **Training Needs Analysis** (**TNA**)) is the formal process of identifying the training gap and its related training need.

Images for training need analysis

- Report images

Target Population Profiles/Communication Channels/Media usage ...

*www.nei.nih.gov/.../target*_population_profiles_commu - *United States*

File Format: PDF/Adobe Acrobat - Quick View

How to Conduct a Simple Training Needs Assessment - That Works

*humanresources.about.com/.../training needs assessment/.../tr...*Cached-Similar

by Susan Heathfield - in 1,114 Google+ circles

How to Conduct a Training Needs Analysis

*www.dirjournal.com/guides/how-to-conduct-a-**training-needs-analysis**/*

Definition of target population and sampling

www.ktl.fi/publications/ehrm/product3/section2_1.htm [PDF]

target population and sample size

www.ehes.info/manuals/EHES_manual/PartA/Chapter2.pdf

File Format: PDF/Adobe Acrobat - Quick View

Bloom's Taxonomy or Learning Domains - Businessballs

www.businessballs.com › *human resources* Cached - Similar

Block all www.businessballs.com results

Overview of learning styles

*www.**learning-styles**-online.com/overview/*

Learning Styles

*www.ncsu.edu/felder-public/**Learning_Styles**.html*

Lesson Planning

*www.personal.psu.edu/scs15/idweb/**lessonplanning**.htm*

Lesson plan - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Lesson plan

Lesson plans for teachers

*www.microsoft.com/education/**lessonplans**.mspx*)

Topic 02: Domains of Learning

1. **Aim :** To teach the domains of learning so that the teachers in the Universities would teach in all three domains, and in each domain at the desired levels, so that the undergraduates would obtain the required knowledge at the desired level as well as needed attitudes and skills.

2. **Learning Outcomes:** Participants would be able to

   - Explain the 3 domains of learning
   - Explain the six levels in the cognitive domain, and write an example for each level for the courses they teach
   - State that there is a revised version of the cognitive domain
   - List the different levels in the affective and psychomotor domain
   - Write an objective for each domain of learning
   - Appreciate the need to teach in all the three domains of learning

3. **Duration:** 75 minutes

4. **Teaching / Learning Resources:**

   White Board, cards, blu-tack, lap-top and multi-media projector

5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
2.1	Question to trainees: Can you give examples of areas that are important to develop in your students? Ensure that you obtain examples from all 3 domains of learning and write them in three groups on the board as they are being stated by the participants.	BS	WB	8

	- Give the common heading to the groups as: Knowledge, Attitudes, and Skills - Then, ask/give the technical terms: - Cognitive, Affective, and Psychomotor			
2.2	Obtain from the participants the importance of each area. Focus especially on the affective and skill area for those not focusing on them. Quick review	Q & A Q & A		6
2.3	Request each participant to choose one subject and to identify at least 5 objectives for each domain.	TA		5
2.4	Request some trainees to write at least one objective on a card. Paste this on the board. Ask whether all are at the same level. Bring out the different levels in the cognitive domain. (i.e. Knowledge, Comprehension, Application, Analysis, Evaluation, Creation) Explain that there is a revised version of the cognitive domain	MD	Cds BT	15
2.5	Explain the levels in the affective domain. - Receiving - Responding - Valuing - Organization - Internalizing -	Q & A	MM	10

2.6	Explain the levels in the psychomotor domain. - Perception - Set - Guided response - Mechanism - Complex overt response - Adaptation - Origination	VE	MM	10
2.7	2.7.1 Impress the importance of working at different levels. 2.7.2 Different year of study, different programs (e.g. general, special) etc.	Dn		10
2.8	Summary Recap the main points (i.e. 3 domains of learning, levels in each domain, importance of objectives for determined different levels)	Q & A		5

6. Assessment:

- Trainees should write 5 examples for each domain that is relevant to their field of teaching.
- Trainees should write 2 examples for each level in the cognitive domain relevant to their field of teaching.

7. Essential Reading:

http://www.nwlink.com/~donclark/hrd/bloom.html

8. Supplementary Reading:

http://www.businessballs.com/bloomstaxonomyoflearningdomains.htm

Supplementary Reading

These readings are from the sources indicated. Minor modifications and reorganization of the material has been done in some cases.

Bloom's Taxonomy of Learning Domains

From: http://www.nwlink.com/~Donclark/hrd/bloom.html

The Three Types of Learning

There is more than one type of learning. A committee of colleges, led by Benjamin Bloom (1956), identified three domains of educational activities:

- **Cognitive**: mental skills (Knowledge)
- **Affective**: growth in feelings or emotional areas (Attitude)
- **Psychomotor**: manual or physical skills (Skills)

Trainers often refer to these three categories as KSA (Knowledge, Skills, and Attitude). This taxonomy of learning behaviors can be thought of as "the goals of the learning process." That is, after a learning episode, the learner should have acquired new skills, knowledge, and/or attitudes.

This compilation divides the three domains into subdivisions, starting from the simplest behavior to the most complex. The divisions outlined are not absolutes and there are other systems or hierarchies that have been devised in the educational and training world. However, Bloom's taxonomy is easily understood and is probably the most widely applied one in use today.

Cognitive Domain

The cognitive domain (Bloom, 1956) involves knowledge and the development of intellectual skills. This includes the recall or recognition of specific facts, procedural patterns, and concepts that serve in the development of intellectual abilities and skills. There are six major categories, which are listed in order below, starting from the simplest behavior to the most complex. The categories can be thought of as degrees of difficulties. That is, the first ones must normally be mastered before the next ones can take place.

Category	Example and Key Words (verbs)
Knowledge: Recall data or information.	**Examples**: Recite a policy. Quote prices from memory to a customer. Knows the safety rules. **Key Words**: defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states.
Comprehension: Understand the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words.	**Examples**: Rewrites the principles of test writing. Explain in one's own words the steps for performing a complex task. Translates an equation into a computer

	spreadsheet. **Key Words**: comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives an example, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates.
Application: Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place.	**Examples**: Use a manual to calculate an employee's vacation time. Apply laws of statistics to evaluate the reliability of a written test. **Key Words**: applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.
Analysis: Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences.	**Examples**: Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training. **Key Words**: analyzes, breaks down,

	compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates.
Synthesis: Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.	**Examples**: Write a company operations or process manual. Design a machine to perform a specific task. Integrates training from several sources to solve a problem. Revises and process to improve the outcome. **Key Words**: categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes.

Evaluation: Make judgments about the value of ideas or materials.	**Examples**: Select the most effective solution. Hire the most qualified candidate. Explain and justify a new budget. **Key Words**: appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports.

Affective Domain

The affective domain includes the manner in which we deal with things emotionally, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The five major categories are listed from the simplest behavior to the most complex:

Category	**Example and Key Words (verbs)**
Receiving Phenomena: Awareness, willingness to hear, selected attention.	**Examples**: Listen to others with respect. Listen for and remember the name of newly

	introduced people. **Key Words**: asks, chooses, describes, follows, gives, holds, identifies, locates, names, points to, selects, sits, erects, replies, uses.
Responding to Phenomena: Active participation on the part of the learners. Attends and reacts to a particular phenomenon. Learning outcomes may emphasize compliance in responding, willingness to respond, or satisfaction in responding (motivation).	**Examples**: Participates in class discussions. Gives a presentation. Questions new ideals, concepts, models, etc. in order to fully understand them. Know the safety rules and practices them. **Key Words**: answers, assists, aids, complies, conforms, discusses, greets, helps, labels, performs, practices, presents, reads, recites, reports, selects, tells, writes.
Valuing: The worth or value a person attaches to a particular object, phenomenon, or behavior. This ranges from simple acceptance to the more	**Examples**: Demonstrates belief in the democratic process.

complex state of commitment. Valuing is based on the internalization of a set of specified values, while clues to these values are expressed in the learner's overt behavior and are often identifiable.	Is sensitive towards individual and cultural differences (value diversity). Shows the ability to solve problems. Proposes a plan to social improvement and follows through with commitment. Informs management on matters that one feels strongly about. **Key Words**: completes, demonstrates, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works.
Organization: Organizes values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system. The emphasis is on comparing, relating, and synthesizing values.	**Examples**: Recognizes the need for balance between freedom and responsible behavior. Accepts responsibility for one's behavior. Explains the role of

	systematic planning in solving problems. Accepts professional ethical standards. Creates a life plan in harmony with abilities, interests, and beliefs. Prioritizes time effectively to meet the needs of the organization, family, and self. **Key Words**: adheres, alters, arranges, combines, compares, completes, defends, explains, formulates, generalizes, identifies, integrates, modifies, orders, organizes, prepares, relates, synthesizes.
Internalizing values (characterization): Has a value system that controls their behavior. The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Instructional objectives are concerned with the student's general patterns of adjustment (personal, social, emotional).	**Examples**: Shows self-reliance when working independently. Cooperates in group activities (displays teamwork). Uses an objective approach in problem solving.

	Displays a professional commitment to ethical practice on a daily basis. Revises judgments and changes behavior in light of new evidence. Values people for what they are, not how they look. **Key Words**: acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves, verifies.

Psychomotor Domain

The psychomotor domain (Simpson, 1972) includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution. The seven major categories are listed from the simplest behavior to the most complex:

Category	Example and Key Words (verbs)
Perception: The ability to use sensory cues to guide motor activity. This ranges from sensory stimulation, through cue selection, to translation.	**Examples**: Detects non-verbal communication cues. Estimate where a ball will land after it is thrown and then moving to the correct location to catch the ball. **Key Words**: chooses, describes, detects, differentiates, distinguishes, identifies, isolates, relates, selects.
Set: Readiness to act. It includes mental, physical, and emotional sets. These three sets are dispositions that predetermine a person's response to different situations (sometimes called mindsets).	**Examples**: Knows and acts upon a sequence of steps in a manufacturing process. Recognize one's abilities and limitations. Shows desire to learn a new process (motivation). NOTE: This subdivision of Psychomotor is closely related with the "Responding to phenomena" subdivision of

	the Affective domain. **Key Words**: begins, displays, explains, moves, proceeds, reacts, shows, states, volunteers.
Guided Response: The early stages in learning a complex skill that includes imitation and trial and error. Adequacy of performance is achieved by practicing.	**Examples**: Follows instructions of instructor in learning to drive. **Key Words**: copies, traces, follows, react, reproduce, responds
Mechanism: This is the intermediate stage in learning a complex skill. Learned responses have become habitual and the movements can be performed with some confidence and proficiency.	**Examples**: Drive a car. **Key Words**: assembles, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches.
Complex Overt Response: The skillful performance of motor acts that involve complex movement patterns. Proficiency is indicated by a quick, accurate, and highly coordinated performance, requiring a minimum of energy. This	**Examples**: Maneuvers a car into a tight parallel parking spot. Displays competence while playing the piano.

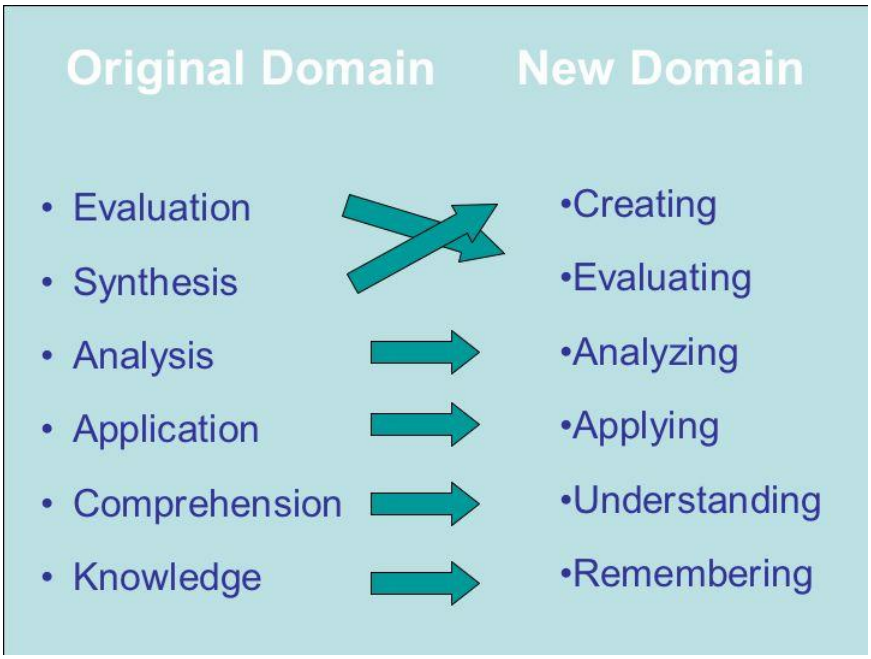
category includes performing without hesitation, and automatic performance. For example, players are often utter sounds of satisfaction or expletives as soon as they hit a tennis ball or throw a football, because they can tell by the feel of the act what the result will produce.	**Key Words**: assembles, builds, calibrates, constructs, dismantles, displays, fastens, fixes, grinds, heats, manipulates, measures, mends, mixes, organizes, sketches. NOTE: The Key Words are the same as Mechanism, but will have adverbs or adjectives that indicate that the performance is quicker, better, more accurate, etc.
Adaptation: Skills are well developed and the individual can modify movement patterns to fit special requirements.	**Examples**: Responds effectively to unexpected experiences. Modifies instruction to meet the needs of the learners. Perform a task with a machine that it was not originally intended to do (machine is not damaged and there is no danger in performing the new task). **Key Words**: adapts, alters, changes, rearranges, reorganizes, revises, varies

Origination: Creating new movement patterns to fit a particular situation or specific problem. Learning outcomes emphasize creativity based upon highly developed skills.	**Examples**: Develops a new and comprehensive training programming. Creates a new gymnastic routine. **Key Words**: arranges, builds, combines, composes, constructs, creates, designs, initiate, makes, originates.

Bloom's Revised Taxonomy

Lorin Anderson, a former student of Bloom, revisited the cognitive domain in the learning taxonomy in the mid-nineties and made some changes, with perhaps the two most prominent ones being, 1) changing the names in the six categories from noun to verb forms, and 2) slightly rearranging them.

This new taxonomy reflects a more active form of thinking and is perhaps more accurate:



Category	Example and Key Words (verbs)
Remembering: Recall previous learned information.	**Examples**: Recite a policy. Quote prices from memory to a customer. Knows the safety rules. **Key Words**: defines, describes, identifies, knows, labels, lists, matches, names, outlines, recalls, recognizes, reproduces, selects, states.
Understanding: Comprehending the meaning, translation, interpolation, and interpretation of instructions and problems. State a problem in one's own words.	**Examples**: Rewrites the principles of test writing. Explain in one's own words the steps for performing a complex task. Translates an equation into a computer spreadsheet. **Key Words**: comprehends, converts, defends, distinguishes, estimates, explains, extends, generalizes, gives an example, infers, interprets, paraphrases, predicts, rewrites, summarizes, translates.

Applying: Use a concept in a new situation or unprompted use of an abstraction. Applies what was learned in the classroom into novel situations in the work place.	**Examples**: Use a manual to calculate an employee's vacation time. Apply laws of statistics to evaluate the reliability of a written test. **Key Words**: applies, changes, computes, constructs, demonstrates, discovers, manipulates, modifies, operates, predicts, prepares, produces, relates, shows, solves, uses.
Analyzing: Separates material or concepts into component parts so that its organizational structure may be understood. Distinguishes between facts and inferences.	**Examples**: Troubleshoot a piece of equipment by using logical deduction. Recognize logical fallacies in reasoning. Gathers information from a department and selects the required tasks for training. **Key Words**: analyzes, breaks down, compares, contrasts, diagrams, deconstructs, differentiates, discriminates, distinguishes, identifies, illustrates, infers, outlines, relates, selects, separates.
Evaluating: Make judgments about the value of ideas or materials.	**Examples**: Select the most effective solution.

	Hire the most qualified candidate. Explain and justify a new budget. **Key Words**: appraises, compares, concludes, contrasts, criticizes, critiques, defends, describes, discriminates, evaluates, explains, interprets, justifies, relates, summarizes, supports.
Creating: Builds a structure or pattern from diverse elements. Put parts together to form a whole, with emphasis on creating a new meaning or structure.	**Examples**: Write a company operations or process manual. Design a machine to perform a specific task. Integrates training from several sources to solve a problem. Revises and process to improve the outcome. **Key Words**: categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, tells, writes.

Topic 03: Learning and Instruction

1. **Aim:** To teach Gagne's phases of learning, and his events of instruction, Keller's ARCS model of motivation, and Howard Gardner's multiple intelligences theory so that University teachers would better understand certain important factors that affect learning.

2. **Learning Outcomes:** Participants would be able to

   - Acknowledge the greater importance of learning as opposed to teaching in a higher educational learning environment
   - List the 8 phases of learning as given by Gagne
   - Design instructional strategies corresponding to the 9 events of instruction as given by Gagne
   - Consider motivation as extremely important for enabling learning to take place
   - Describe the 4 main components of the ARCS model of motivation
   - Employ the strategies given in the ARCS model
   - Judge the importance of using different strategies to cater to different preferences for learning
   - Give examples from their area of teaching for the 7 categories in Howard Gardner's multiple intelligences theory

3. **Duration:** 150 minutes

4. **Teaching / Learning Resources:**

   White Board, cards, blu-tack, lap-top and multi-media projector

5. Lesson Content and Methods:

No.	Content Outline	T & L Md.	TLR	Time (min)
3.1	What should our focus be on in terms of developing the students? Should it be on 'teaching'? Ask each trainee to think about this individually and decide on an answer. Ask how many say 'Yes' to this. Ask the others what their alternative is. Bring out the importance or 'learning' as the primary goal, and that teaching is only a means of achieving this. Bring out the need to better understand the process of learning if we are to have a greater impact on it.	SR Q & A Q & A VE		7
3.2	Ask trainees to think of a specific learning situation they underwent, and the different steps they went through. Ask them to state the different steps, and let some write the relevant steps on cards. Paste the cards on the board with blu-tack. Reorder the cards to get Gagne's Phases of Learning 1. Attention/ alertness 2. Expectancy 3. Retrieval to working memory 4. Selective perception 5. Encoding (Long Term Memory) 6. Responding 7. Feedback 8. Cuing retrieval Explain each of the above, and relate their relevance to the teaching process.	Q & A MD VE	Cds BT	10

3.3	Ask what a lecturer could do to promote each of the stages identified in the phases of learning, and bring out the following 'Events of Instruction' as given by Gagne. 1. Gaining attention 2. Informing objectives 3. Stimulating recall 4. Presenting stimulus material 5. Providing learning guidance 6. Eliciting performance 7. Providing feedback 8. Assessing performance 9. Enhancing retention and transfer	BS	WB	15
3.4	Trainees to write one example for each event of instruction	TA		7
3.5	Motivation Ask a number of WHY? Questions (e.g. why do we drink water, eat, study, work, communicate etc). to bring out the very real importance of motivation in whatever we do. Relate this real need for learning by students too. Explain the ARCS model of motivation ARCS Model – Attention Relevance Confidence Satisfaction	Q & A VE	MM	5 10

3.6	Brainstorm as to how each of the above could be achieved and bring out the following strategies for each category. Attention - Perceptual arousal - Inquiry arousal - Variability Relevance - Goal orientation - Motive matching - Familiarity Confidence - Learning requirements - Success opportunities - Personal control Satisfaction - Intrinsic reinforcement - Extrinsic rewards - Equity	BS	WB & MM	25
3.7	Trainees to work with a partner to determine how the ARCS model could be used to enhance motivation in their classrooms	TA		10
3.8	Ask whether all students like quantitative subjects like mathematics and statistics equally. Or whether the preference for essay writing is equal in all students. Bring out the variability in preferences in students. Explain that this is related to their differences in the preferred mode of learning, which is their learning style.	Q & A VE	MM	20

<table>
<tr><td></td><td>Bring out and explain the following learning preferences known as

Howard Gardner's multiple intelligences theory

<table><tr><th>Intelligence type</th><th>Capability and perception</th></tr><tr><td>Linguistic</td><td>words and language</td></tr><tr><td>Logical-Mathematical</td><td>logic and numbers</td></tr><tr><td>Musical</td><td>music, sound, rhythm</td></tr><tr><td>Bodily-Kinesthetic</td><td>body movement control</td></tr><tr><td>Spatial-Visual</td><td>images and space</td></tr><tr><td>Interpersonal</td><td>other people's feelings</td></tr><tr><td>Intrapersonal</td><td>self-awareness</td></tr></table></td><td></td><td></td><td></td></tr>
<tr><td>3.9</td><td>Ask the trainees to note sections of courses that would lend themselves for focusing on the different learning preferences.
Ask them to share the above possibilities with the rest of the group.</td><td>TA

TS</td><td></td><td>5</td></tr>
<tr><td>3.10</td><td>Summary

Trainees to state what they wrote during class for the following;

- Events of instruction
- ARCS Model
- Varying to cater to different learning preferences

Ensure that these examples cover the main points of each area</td><td>TSm

(Q & A)</td><td></td><td>20</td></tr>
</table>

6. Assessments:

Application of the following in the micro-teaching session:

- Events of instruction
- Strategies in the ARCS model

7. Essential Reading:

http://mailer.fsu.edu/~jkeller/Articles/Keller%202000%20ARCS%20Lesson%20Planning.pdf

http://www.businessballs.com/howardgardnermultipleintelligences.htm#vak%20visual%20auditory%20kinesthetic%20learning%20styles%20inventory%20theory%20model

Supplementary Readings

These readings are from the sources indicated. Minor modifications and reorganization of the material has been done in some cases.

http://education.purduecal.edu/Vockell/EdPsyBook/Edpsy3/edpsy3_learning.htm

The Phases of Learning

The teaching/learning process can be described by the eight events of learning described by Gagne (1985), as shown in the Figure given below.

Attention: Alertness

Expectancy

Retrieval to Working Memory

Selective Perception

Encoding: Entry to LTM

Responding

Feedback

Cueing Retrieval

The eight phases of learning (based on Gagne, 1985)

In order for effective learning to take place, the learner must go through all eight of these phases. A serious breakdown at any one phase or a cumulative breakdown over several phases can bring learning to a halt. When teachers, textbook writers, computer programmers, or others decide to develop instructional materials or presentations, it is important that they verify that all eight of these events will occur. If the instructional designer does not plan for all eight phases, then either (1) some other person or material must supply the missing steps or (2) effective learning will not occur. The following paragraphs briefly describe each of these phases of learning:

1. **Attention.** As we shall discuss in chapter 6, learning is not likely to occur in the absence of attention. Attention is essential for getting information into the working memory and keeping it active there. Therefore, the first phase in the learning process is that the learner must focus attention on the learning activity. Although this is listed as the "first phase," attention must be maintained throughout the other phases as well.

2. **Expectancy**. During this phase, the learner develops an expectancy that something desirable will happen as a result of the proposed learning process. The result is a **motivation** to engage in the subsequent phases of the learning process.

3. **Retrieval of Relevant Information to Working Memory**. The learner retrieves from long-term memory the structures that will be helpful in learning new information or solving problems that have been encountered.

4. **Selective Perception**. During this phase the learner focuses attention on the essential features of the instructional presentation. It is not always possible for teachers to ascertain by simple inspection where students are focusing attention; and learners often fail to learn because they have focused on the wrong information.

It is possible for teachers to help learners direct their attention appropriately through strategies as diverse as simply asking them what they are thinking about and using measures of attention to ascertain where they are focusing.

Failures at this selective perception can occur either because the presentation inadequately draws attention, because the learner fails to direct attention, or because of a combination of both of these reasons. A frequent source of faulty selective perception is a fundamental misconception about the topic under consideration: the learner may think he/she is focusing on the correct information, when in reality this is a mistake.
Teachers often assume that because their own attention is focused on the right aspects of the presentation, their students must be focusing on the same aspects. It is best to test this assumption and to make corrections when necessary.

5. **Encoding: Entry of Information into Long-Term Storage**. During this phase the learner encodes the information - that is, transfers the information into long-term memory by relating it to information that is already stored there.

6. **Responding**. During this phase the learner retrieves and actively uses the information that has been stored in long-term memory. The learner demonstrates through an active performance that the learning has taken place.

7. **Feedback.** During this phase the learner determines the degree to which the performance during the previous phase was satisfactory. When the feedback indicates acceptable performance, this usually serves as reinforcement to the learner. The students who evaluate themselves negatively or extrinsically are likely to develop an orientation toward extrinsic motivation, which is likely to interfere with achievement.

8. **Cueing Retrieval**. During this phase the learner practices recalling or applying the information after it has been initially learned in order to enhance retention of the information or to transfer the learning beyond its original context to a new application.

When we say that the learner must go through all eight of these phases in order for learning to occur, this does not mean that the teacher is the person responsible for causing all eight of them occur. Somebody (usually either the teacher or the student) must see to it that all of these phases occur, but the actual role of the teacher will vary from situation to situation and from student to student. For example:

- The teacher might give an introduction to a topic that catches the student's attention (phase 1) and causes the student to develop an expectancy (phase 2) that it would be interesting to know more about the topic.
- The student might then open the textbook and find a good presentation that focuses his attention exactly on the key points necessary to understand that topic (phase 4).
- While reading the textbook, the student might without even being aware that it is happening bring to mind information that he already has previously learned that is related to the text presentation (phase 3).
- The student might easily fit the information into long-term memory by relating it to previous knowledge; or he may be concerned that he might forget the information and run a computer program that offers a drill on the topic to make it easier to retrieve it later (phase 5).
- The learner might ask himself questions about the topic or answer review questions published in the textbook; and eventually he might take a test designed by the textbook company and administered by the teacher (phase 6).
- While studying from the textbook, the student might check the answer key to see if his responses are correct; and the teacher would grade the test and return it to the student (phase 7).

- After successfully passing the unit quiz, the student might still occasionally review the material in order to keep it available for the final examination. In addition, he might find occasions to generalize the information to other settings by applying what he has learned when he sees the relationship of the information to other problems or topics (phase 8).

If the learner does all these activities by himself, effective learning will occur. If any phase does not occur or occurs imperfectly, learning will be weakened. In such cases, the teacher should intervene to help the learner accomplish the activities that comprise that phase of learning. For example, if the student does not respond on his own, the teacher could assign review questions as a homework assignment, call on the student in class, provide class time to let students study together, or supply interesting problems that stimulate the learner to use the information that was encoded during phase 5.

http://de.ryerson.ca/portals/de/assets/resources/Gagne%27s_Nine_Events.pdf

Gagné's Nine Events of Instruction

The Nine Events

1. Gain attention

The first step is to arouse the student's interest with novelty or surprise. You may also want to appeal to the learner by asking questions, so that they will be further motivated to engage with the content.

2. Inform learner of objectives

As stated in the handout "Writing Effective Learning Objectives" it is important to inform the learner of the expectations that you have of them. This will help reduce anxiety in students who would otherwise not know what they should be studying.

3. Stimulate recall of prior learning

Students, especially adult learners, retain concepts and new information better if the concepts are related to something they already know. In this way, they can make the connection to their personal experiences and the learning will be more meaningful.

4. Present stimulus material

At this point in the learning process, the content is presented to the students. For the student to retain information it is preferable that the content be organized into meaningful chunks, and that a variety of methods appealing to all learning styles be used. Using examples and real-life situations is also a great way to enhance the retention of information, as learners can apply the material to their own life experiences and internalize the content.

5. Provide learner guidance

Communication between the instructor and the learner is an essential means of providing guidance. Not only does communication help the learner stay on track, but it also ensures that the instructor has an idea of how the students are doing. Other means of guidance come in the form of visual material such as graphs, videos, case studies, mnemonics, and analogies, which assist the learner in retaining and encoding the information into their long-term memory.

6. Elicit performance

Once the content is presented and hopefully understood, learners need an opportunity to practice. Often, the same examples that have previously been presented are used and new ones are introduced to see if the learner truly understands or is just repeating what was done before. Good practice items should:

- Clearly specify the practice format and nature of the student response
- Be relevant to the objective
- Elicit the exact performance stated in the objective
- Be provided as frequently and immediately following instruction as possible

7. Provide feedback

Feedback is essentially additional guidance. If the learner has not yet grasped a concept or idea, this is the time to provide more information and different examples. Good feedback should:

- Provide comments about the student's performance
- Be immediate and frequent
- Enable students to correct their own mistakes when possible

8. Assess performance

At the end of a course, student performance is assessed in order to determine if the desired learning has occurred. Keep in mind that assessments should match the stated objectives in order to provide accurate judgment.

9. Enhance retention and transfer

Once the final exam is complete, most students assume that the course is over. However, it is important to help students apply their knowledge to areas outside of the course. To do so, it is a good idea to provide learners with meaningful context in which to use this new knowledge.

The following table outlines how the different events are related to the phases of learning and as to what the teacher and students could do to enhance the accomplishment of that phase.

http://education.calumet.purdue.edu/vockell/edPsybook/Edpsy3/edpsy3_instruction.htm

The Events of Instruction

(Robert Gagne)

Events of Instruction, Phases of Learning, and How They Relate to Learner Activities.				
Event of Instruction	**Learning Phase**	**How Teacher or Text Does It**	**How Students Self-Instruct**	**When to Skip This Event**
1 **Gaining attention**	**1** **Attention: Alertness**	Sudden stimulus change. Call for attention.	Underlining. Mood management.	When attention can be assumed – when learner is already alert.
2 **Informing learner of objectives: activating motivation**	**2** **Expectancy**	State objectives and relate them to students' needs and interests.	Student selects own objectives. (This usually comes first.)	Almost never – but maybe if the objective is obvious.
3 **Stimulating recall of prior knowledge**	**3** **Retrieval to Working Memory**	"Remember"…." Give an exercise or review activity to recall previous information.	Student looks for and retrieves relevant prior information. Often students do this without even realizing that it is	Almost never- but skillful self-learners may do this themselves.

			happening.	
4 **Presenting the stimulus material**	**4** **Selective Perception**	Text, audiovisual, or voice presentation. Objects or demonstration materials Show distinctive features and focus attention on them.	Student seeks out and finds relevant material to provide instruction.	Almost never- although learners may acquire stimulus material on their own initiative.
5 **Providing learning guidance**	**5** **Encoding : to Long-term Memory**	Provide meaningful context. Offer organizing strategies. Relate encoding to the objectives.	Student uses rehearsal or chunking strategies. Student selects storage structures to retain information. Student employs cognitive strategies	When the learner already possesses effective cognitive strategies.
6 **Eliciting perform-ance**	**6** **Respon-ding**	Ask learner to perform. Use review quizzes or recital questions.	Student performs without prompting from teacher.	Student performs without prompting
7	**7**	Inform learner of degree of	Student evaluates own performance	Almost never - but

Providing feedback	**Feedback**	correctness of answer.		sometimes the student does it.
8 **Assessing perform-ance**	**7** **Feedback**	Teacher samples repeated performance and makes judgment about quality.	Student tests self and modifies strategies or plans for self-instruction as necessary.	Student may assess self and make accurate judgments.
9 **Enhancing retention and transfer**	**8** **Cueing Retrieval**	Spaced reviews, including a variety of examples and applications.	Student looks for more examples of additional relationships.	Student may take initiative to seek additional examples and relationship s.

ARCS Model of Motivation

Source:http://edweb.sdsu.edu/courses/edtec670/archives/cases-F02/edtec540/ARCSModelHandout.pdf

Keller has developed a four-factor theory to explain motivation. The first is attention (A), the second relevance (R), the third confidence (C), and the fourth satisfaction (S). Strategies to facilitate each factor are given in the following table. The model also contains strategies that can help an instructor stimulate or maintain each motivational element.

ARCS Categories

Attention	Relevance	Confidence	Satisfaction
A1 Perceptual arousal A2 Inquiry arousal A3 Variability	R1 Goal orientation R2 Motive matching R3 Familiarity	C1 Learning requirements C2 Success opportunities C3 Personal control	S1 Intrinsic reinforcement S2 Extrinsic rewards S3 Equity

Attention Factor

A student's attention has to be aroused and sustained. This category also includes things that relate to curiosity and sensation seeking.

Strategies

• Perceptual Arousal. Gain and maintain student attention by the use of novel, surprising, incongruous, or uncertain events in instruction.

• Inquiry Arousal. Stimulate information seeking behavior by posing, or having the learner generate questions, or a problem to solve.

• Variability. Maintain student interest by varying the elements of instruction.

Relevance Factor

After the student's attention is gained, a student may wonder how the given material relates to their interests and goals. If the content is perceived to be helpful in accomplishing one's goals, then they are more likely to be motivated.

Strategies

• Familiarity. Use concrete language and use examples/concepts that are related to the learner's experience and values.

• Goal Orientation. Provide statements or examples that present the objectives and utility of the instruction and either present goals for accomplishment or have the learner define them.

• Motive Watching. Use teaching strategies that match the motive profiles of the students.

Confidence Factor

Students have to know that they will probably be successful before completing a given task. They have to feel somewhat confident. Success is not guaranteed and people enjoy a challenge. However, the challenge can't be too difficult.

Strategies

• Learning Requirements. Help students estimate the probability of success by presenting performance requirements and evaluative criteria.

• Success Opportunities. Provide challenge levels that allow meaningful success experience under both learning and performance conditions.

• Personal Control. Provide feedback and opportunities for control that support internal attributions for success.

Satisfaction Factor

If the outcome of a learner's effort is consistent with their expectations and they feel relatively good about those outcomes, they will remain motivated.

Strategies

• Natural consequences. Provide opportunities to use newly acquired knowledge or skill in a real or stimulated setting.

• Positive consequences. Provide feedback and reinforcements that will sustain the desired behavior.

• Equity. Maintain consistent standards and consequences for task accomplishment.

Additional Source:

http://www.learning-theories.com/kellers-arcs-model-of-motivational-design.html

Howard Gardner's multiple intelligences

Source:http://www.businessballs.com/howardgardnermultipleintelligences.htm#vak%20visual%20auditory%20kinesthetic%20learning%20styles%20inventory%20theory%20model

The detailed diagram below expands the detail for the original seven intelligences, and also suggests ideas for applying the model and underpinning theories, so as to optimise learning and training, design accelerated learning methods, and to assess training and learning suitability and effectiveness.

	Intelligence type	Description	Typical roles	Related tasks, activities or tests	Preferred learning style clues
1	**Linguistic**	**words and language**, written and spoken; retention, interpretation and explanation of ideas and information via language, understands relationship between communication and meaning	writers, lawyers, journalists, speakers, trainers, copy-writers, English teachers, poets, editors, linguists, translators, PR consultants, media consultants, TV and radio	write a set of instructions ; speak on a subject; edit a written piece or work; write a speech; commentate on an event; apply positive or negative 'spin' to a	words and language

			presenters, voice-over artistes	story	
2	**Logical-Mathematical**	**logical thinking**, detecting patterns, scientific reasoning and deduction; analyse problems, perform mathematical calculations, understands relationship between cause and effect towards a tangible outcome or result	scientists, engineers, computer experts, accountants, statisticians, researchers, analysts, traders, bankers bookmakers, insurance brokers, negotiators, deal-makers, trouble-shooters, directors	perform a mental arithmetic calculation; create a process to measure something difficult; analyse how a machine works; create a process; devise a strategy to achieve an aim; assess the value of a business or a proposition	numbers and logic
3	**Musical**	**musical ability**, awareness, appreciation and use of sound;	musicians, singers, composers, DJ's, music producers, piano tuners,	perform a musical piece; sing a song; review a musical	music, sounds, rhythm

		recognition of tonal and rhythmic patterns, understands relationship between sound and feeling	acoustic engineers, entertainers, party-planners, environment and noise advisors, voice coaches	work; coach someone to play a musical instrument; specify mood music for telephone systems and receptions	
4	**Bodily-Kinesthetic**	**body movement control**, manual dexterity, physical agility and balance; eye and body coordination	dancers, demonstrators, actors, athletes, divers, sports-people, soldiers, fire-fighters, PTI's, performance artistes; ergonomists, osteopaths, fishermen, drivers, crafts-people; gardeners, chefs,	juggle; demonstrate a sports technique; flip a beer-mat; create a mime to explain something; toss a pancake; fly a kite; coach workplace posture, assess work-station ergonomics	physical experience and movement, touch and feel

			acupuncturists, healers, adventurers		
5	**Spatial-Visual**	**visual and spatial perception**; interpretation and creation of visual images; pictorial imagination and expression; understands relationship between images and meanings, and between space and effect	artists, designers, cartoonists, story-boarders, architects, photographers, sculptors, town-planners, visionaries, inventors, engineers, cosmetics and beauty consultants	design a costume; interpret a painting; create a room layout; create a corporate logo; design a building; pack a suitcase or the boot of a car	pictures, shapes, images, 3D space
6	**Interper-sonal**	**perception of other people's feelings**; ability to relate to others; interpretation of behaviour and communications;	therapists, HR professionals, mediators, leaders, counselors, politicians, educators, sales-people, clergy, psychologists	interpret moods from facial expressions; demonstrate feelings through body language; affect the	human contact, communications, cooperation, teamwork

		understands the relationships between people and their situations, including other people	, teachers, doctors, healers, organisers, carers, advertising professionals , coaches and mentors; (there is clear association between this type of intelligence and what is now termed 'Emotional Intelligence' or EQ)	feelings of others in a planned way; coach or counsel another person	
7	**Intraper-sonal**	**self-awareness**, personal cognisance, personal objectivity, the capability to understand oneself, one's relationship to others and the world, and	arguably anyone (see note below) who is self-aware and involved in the process of changing personal thoughts, beliefs and behaviour in	consider and decide one's own aims and personal changes required to achieve them (not necessarily reveal this to others);	self-reflection, self-discovery

		one's own need for, and reaction to change	relation to their situation, other people, their purpose and aims - in this respect there is a similarity to Maslow's Self-Actualisation level, and again there is clear association between this type of intelligence and what is now termed 'Emotional Intelligence' or EQ	consider one's own 'Johari Window', and decide options for developme nt; consider and decide one's own position in relation to the Emotional Intelligence model	

Topic 04: Aims and Objectives/Intended Learning Outcomes/Assessment

1. **Aim:** To teach the significance of aims, objectives, intended learning outcomes and their relationship with assessments so that teachers could be focused on what they would desire to be achieved in lessons, courses and study programs

2. **Learning Outcomes:** Participants would be able to

   - Write aims for lessons, courses and study programs
   - Write objectives and intended learning outcomes for lessons/courses and study programs
   - Distinguish among aims, objectives and intended learning outcomes
   - Recognize the relationship of objectives and intended learning outcomes with assessments

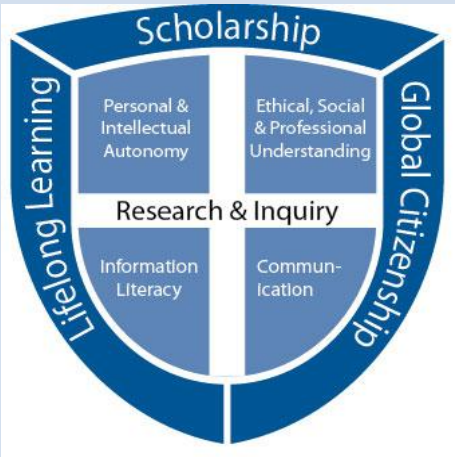
3. **Duration: 75** minutes

4. **Teaching/Learning Resources:**
   - Curriculum of study program
   - Details of course/s taught by participants
   - Bloom's Taxonomy
   - Handout

5. **Lesson Content and Methods:**

No.	Content Outline	Teaching and Learning Method	Time (min)
3.1	Aims In any teaching/learning scenario/process there would be a teacher/student or trainer/trainee combination. Aim: The trainer's role in the learning process In this role of the trainer, there are two major questions that the trainer needs to	Q & A Brainstorming Discussion Individual work Group	8 10

	answer. That is What would the trainer teach? Why would the trainer teach that? So the *What* and the *Why* are important to be clarified in the trainer's task in the process Eg. To teach selected concepts in the teaching/ learning process *so that* trainees will be able to use this knowledge in their career as university teachers	Discussion	
3.2	Objectives What are objectives? Objective: What the trainee should achieve as a result of the instruction. • Since the outcome of learning has to be evaluated in formal education, objectives should be written in such a manner as to include the desired performance or behavior – behavioral objectives • Objectives consist of 3 components a. The performance of the learner - what the learner is able to do b. The condition under which the learner will demonstrate this ability c. The standard that must be achieved – quality of the level of performance that will be considered acceptable eg: At the end of this session, trainees will be able to - write objectives for a lesson of their choice - be accurate and realistic - in an acceptable manner to other participants The key for any objective is the verb that it contains. In the above example, this	Q & A Discussion Individual work Group work Peer feedback	10 9

	verb is 'write'. This directs the trainee/ students towards the action that he/she needs to master. Based on the action verbs, objectives can be written at different levels. According to Bloom and colleagues classification objectives can be written for all 3 domains.		
3.3	Intended Learning Outcomes • Outcomes are broad competencies that the training program aims the graduate to achieve at the end of the program. • These competencies will define the final product. Thus, the competencies need to be extracted by close envisioning the final product. • For example, university of Sydney defines the final product using the following competencies or graduate attributes (Figure).  Figure: The Graduate Attributes of the Sydney Graduate While the above states the outcomes of the graduate it is possible to state intended learning outcomes (ILOs) for courses as well. What should be kept in mind however is that all ILOs should be contributing to the final graduate profile/attributes	Discussion Group activity Individual activity	10 15

3.4	Relationship between Objectives, ILOs and Assessments In writing Aims, Objectives and ILOs it is imperative that they must be - clear - unambiguous - another trainer can work from them Also, the action in the behavioral objective must be observable and the objectives should be realistic. The same would apply to the ILOs. When formulating objectives and ILOs in a lesson, course or study program this is done with the sole intention that such objectives and ILOs are achieved. Thus the "best" method of assuring achievement of these would be to connect the objectives and ILOs to the assessment strategy of courses and study programs. Therefore the Assessment Rules of the study program as a whole and the assessment strategy of individual courses must ensure that objectives and ILOs are realized. The assessment strategies of course should encompass the achievement of objectives and ILOs in all 3 educational domains	Q & A Projection of group and individual work for peer feedback Group activity Discussion	8 5

6. **Assessments**: Participants would write aims, objectives, intended learning outcomes for a course and lesson in a course they teach for each of the domains of teaching and learning.

   Participants would write the assessment strategy for those courses and lessons.

   Participants should justify why the assessment strategy is the "best" or "optimal" one for the stated objectives and ILOs.

7. Suggested Reading:

Writing Aims and Objectives

*www.cshe.unimelb.edu.au/...**teach**/**teaching**_in.../writing_**aims**.pdf*

Aims and Objectives for Teaching and Learning

*www.abdn.ac.uk/admin/**aims**obs.shtml*

Learning Objectives

*www.nottingham.ac.uk/medical-school/tips/**aims_objectives**.html*

Aims, objectives and outcomes - University of Leicester

*www.le.ac.uk/**teaching**/learningoutcomes**aims**.html*

Lesson Planning and Instructional Teaching Methods
for
Undergraduate Teaching

1	Module Title	Module 2:Teaching Methods
2	**Module Duration**	5 hrs (300 min)
3	**Prerequisites and Co-requisites**	Engage in teaching (e.g. conduct lessons in theory and practical) for undergraduate study programs and have followed module 1 of this manual
4	**Module Aims**	To teach the principles and practice of different teaching methods, so that participants will be able to use them in planning and delivering lessons effectively to suit their teaching/learning situation.
5	**Objectives and Learning Outcomes**	• To identify teaching methods that would suit classroom teaching most effective • To plan such teaching methods to achieve intended learning outcomes of lessons, courses and study programs • To recognize the advantages and disadvantages in using these methods and to orient them to bring optimal outcomes • To deliver lessons using these methods to make them more student centered • To ensure that resources essential for such teaching methods are made available to bring out the best in the learner
6	**Assessment Strategy**	One or a mix of Assignments and/or Portfolio
7	**Syllabus**	• Lecture • Discussion • Case Studies • Role Play

Topic 01: Lecture

1. **Aim:** To teach the significance of using lecture as an instructional teaching method in higher education so that teachers would be able to use it effectively in scenarios/situations where it is most appropriate.

2. **Learning Outcomes:** Participants would be able to

   - Define a lecture
   - State the main features of a lecture
   - Stat how a lecture influences learning
   - Discuss the advantages and disadvantages of a lecture
   - Discuss what learners want from teachers and how a lecture could fulfill these
   - Discuss aspects to communicate with confidence
   - Recognize the common weaknesses of lecturing

3. **Duration:**75 minutes

4. **Teaching/Learning Resources:**
   - Curriculum of study program
   - Details of course/s taught by participants
   - Bloom's Taxonomy

5. **Lesson Content and Methods:**

No.	Content Outline	Teaching and Learning Method	Time (min)
1.1	Definition of a Lecture A lecture is an organized verbal presentation of subject matter, often augmented by visual aids. (Matiru, B., 1995)	Brain storming Discussion Verbal exposition	10
1.2	Main Features of a Lecture • mostly one way • most common method of teaching in Universities • effective for lower levels of cognitive	Q & A	5

	domain (up to comprehension) • less effective for the higher levels of the cognitive domain • less effective for teaching practical skills • less effective for changing attitudes		
1.3	How Does it Influence Learning? Learning is dependent on the way information is • transmitted • received • processed	Verbal Exposition	5
1.4	Transmission • Verbal - explanations, definitions, examples, descriptions, comments • Extra verbal -vocal qualities such as clarity, audibility, fluency, speed • Non verbal -gestures, facial expressions, body movements • Visual - diagrams, pictures, charts Receiving and Processing This is facilitated when the lecture is • Well organized • Interesting • Meaningful Learning is inhibited when the lecture is • confusing • boring • meaningless	Q & A Discussion Individual activity	10
1.5	Preparation of a Lecture • Purpose of lecture • Content • Structure • Key sections/words During the Lecture • Motivation • Explanation • Student participation • Change of activity	Q & A	5

1.6	Advantages • Lecturer: simple, safe method, effective (for information), can explain well • Student: all needed information included, can take down notes • Administrator: cost effective, easy to time table Disadvantages • Learning more passive • Tends to encourage shallow processing • Not suited for skill training and attitude development	Discussion	10
1.7	What do Learners Want from Teachers? • Present the material clearly and logically • Enable understanding of the basic principles of the subject • Can be heard clearly • Makes the material intelligibly meaningful • Covers ground adequately • Maintain continuity in the course • Is constructive and helpful in criticism • Shows an expert knowledge • Adopts an appropriate pace • Include material not readily available • Is concise • Illustrates practical applications of theory of the subject	Group activity	10
1.8	Communication With Confidence Think confidently : Ask yourself whether the “messages” you are sending out are to reinforce or contradict the image that you want people to have of you. If you want to be seen as confident recognize how you communicate and use it positively.	Q & A Verbal Exposition	15

	Make eye contact: Making and maintaining eye contact helps us to come across more confidently. It also improves our ability to listen to what is being said. Remember that staring excessively however can be intimidating. The best thing is to look away every so often. In this way, our listner is more likely to feel comfortable. Think about your facial expressions: Remember to match your expressions to what you are saying and how you are feeling. This causes less confusion in the minds of the receiver. By adapting an expression which matches your verbal message we reinforce what we are expressing. Voice pitch, tone and volume: Avoid high pitch tones. Lower your tone to sound more authoritative and do not speak too quickly Speaking too loud makes you sound aggressive, but speaking too quietly makes you appear unsure of what you are saying Take care with hand signals: Be aware of what you are doing. Wagging a finger could indicate aggression, excessive movements of the hand may express nervousness, and so on. If you are seated try to keep your hands together in a relaxed way on your lap. If standing try to avoid aggressive gestures or over use of hands. Think tall walk straight: Makes us look confident even if we do not feel it. Hunched shoulders and a slouched posture give the impression that we are nervous and unsure of ourselves. We should be aware that we may be seen as such even before we get a chance to prove otherwise. Look good to feel good: Find a personal style which makes you look and feel good.		

	Know what you like and express yourself clearly in your appearance. But make sure you know what "message" your appearance is conveying.		
1.9	**Common Weaknesses in Lecturing** • I say too much too quickly • I assume too much knowledge on the part of students • I forgot to provide a summary of my lecture at the end of the lecture • I do not clearly indicate when I am making an aside as opposed to a major point • I do not give sufficient time for students to copy diagrams and notes • I have difficulty in timing my lectures • I do not clearly indicate reservations or doubts about the main arguments I am putting forward • I do not stress the major points sufficiently • I am frequently not happy with my own knowledge of the topics I am lecturing on – i.e. not widely enough • I do not link the sections together clearly • I do not organize the sections of my lecture clearly • I use too much technical language • I forgot to provide examples and/ or illustrations • I am nervous and anxious when I am lecturing • I tend to make too much use of humor • I usually arrive late • I have difficulty in getting to the point I am trying to make • I do not usually provide a clear opening when I lecture	Individual Activity	5

6. Assessments: Write an assignment on 5 topics in any course that the participant teaches where he/she thinks that lecture is the most suitable teaching method. Discuss why you think so and any significant feature you want to highlight as to why it suits these topics.

7. Suggested Reading:

Lecture as a Teaching Method - Pros and Cons of Lectures

*712educators.about.com/od/lessonplans/p/**lecture**.htm*

What is the lecture method of teaching?

wiki.answers.com › ... › Education › Educational Methods and Theories

[PDF]

What are Some of the Advantages of the Lecture Method of - Intranet

intranet.howardcc.edu/.../**Teaching** Resources/.../Advantages_disadva...Similar

Block all intranet.howardcc.edu results

LECTURE METHOD

navyadvancement.tpub.com/12045/css/12045_68.htm

Advantages and Disadvantages of the Traditional Lecture Method

*cirtl.wceruw.org/.../advantagesanddisadvantagesofthetraditional**lectur***

Topic 02: Discussion

1. **Aim :** To teach about discussions so that the University teachers could use them more effectively to enable more participation, openness to others, and greater sharing of ideas amongst university students.

2. **Learning Outcomes:** Participants would be able to:

- Define what is meant by the term 'discussion'
- Explain the advantages and disadvantages of teaching through discussion
- List the factors that should be considered in preparing for and conducting a discussion
- List different ways of conducting a discussion
- Appreciate the importance of discussion as a teaching tool
- Be better able to conduct a discussion more effectively

3. **Duration**: 75 Minutes

4. **Teaching / Learning Resources:** White board, dimi paper, marker pens

5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
2.1	Divide the trainees into two groups. One group to discuss as given below and the other group to observe. Ask a question about a current topic relevant to the trainees, on which there will be diverse views, and ask them to discuss amongst themselves. Intentionally make the question a broad one and one	Gp. Dn.		8

	on which the trainees will have diverse views. Do not give any instructions on how to conduct the discussion as the intention is to hopefully see a discussion that is not successful. Ask the group observing to write down notes of what they observe. Stop the discussion in a short time when it is clear that it is not very productive.	Ob		
2.2	Ask whether a lecture is the most appropriate to train students in the question that was given. (The question should not be one for which a lecture would have been suitable). Ask why the lecture is not the most suitable. Ask what might be the other options. Bring out the usefulness of a discussion for this topic.	Q & A		5
2.3	Appoint a leader for the discussion (you may select one before this session and brief him earlier as to what he should/should not do.) You can ask him/her not to contribute too much during the first discussion. Reword the question. Ask the group to discuss this again.	Gp. Dn		8
2.4	The observer group to discuss and list down (poster) what should be done, and what should not be done. During this time those who took part in the discussion also to discuss what was done well and what could have been improved during the two discussions.	Gp. Dn & Gp Prsn	Dimi paper & Pens	15

	Prior to the discussion - Plan and prepare for the discussion - Formulate a good question - Rapport – get to know your students in advance - Non threatening environment - Furniture arrangements allows everyone to see and hear the others - Clarify rules and expectations During the discussion - Moderate the discussion - Listen and promote listening to others viewpoints - Ensure participation of all - Summarize periodically at appropriate times After the discussion - Summarize Evaluate the discussion to determine any improvements needed for the next discussion			
2.5	Objectives of discussions. Brainstorm to identify what we are trying to achieve through using discussions: - Critical thinking - Articulation of ideas - Motivation - Helping to remember	BS	WB	10
2.6	Generate different ways a discussion could be conducted: - Common discussion - Discussion in small groups (Buzz group) - Rotating stations - Snowballing - Critical debate See attached notes for additional possibilities	BS	WB	10

2.7	Trainees to write down at least 2 or 3 topics for which a discussion could be relevant and important in their subjects. Some to share this with the rest of the group.	IN SS		5
2.8	Summary Recap the importance Main points to consider in conducting a discussion Bring out the sub points	 Q & A Q & A TSm		7

6. Assessment: Observation of discussion in class with appropriate feedback regarding the process.

7. Essential Reading:

http://teachingcenter.wustl.edu/teaching-discussions

8. Supplementary Reading:

http://www.princeton.edu/mcgraw/library/sat-tipsheets/facilitating-discussion/

http://cft.vanderbilt.edu/teaching-guides/teaching-activities/discussions/

Supplementary Readings

These readings are from the sources indicated. Minor modifications and reorganization of the material has been done in some cases.

http://teachingcenter.wustl.edu/teaching-discussions

Discussions

A discussion is a written or oral expression of different points of view.

It is one of the most challenging teaching methods. Leading discussions can also be one of the most rewarding.

Enables:

To think more deeply. Exploring in-depth the key concepts of the course

- To stimulate critical thinking
- To articulate their ideas more clearly.
- Students to get interested in the topic and thus act as a motivator
- Students to remember
- Questions, whether asked by you or by the students, provide a means of measuring learning

Need to:

- Establish a rapport with your students, demonstrate that you appreciate their contributions, and challenge them to think more deeply.
- Communicate to students the importance of discussion to their success in the course as a whole.

    - Underscore their importance by ensuring that you discuss material that later appears on exams and by integrating students' contributions (with attribution) into subsequent lectures, discussions, and assignments.

Before a discussion:

- Create a comfortable, non-threatening environment

- Encourage participation and questions.

- Get to know your students and the skills and perspectives they bring to the discussions.
  Learn your students' names during the first week of class. Consistently use their names
- Arrange the chairs in a configuration that will allow students to see and speak with one another.
- Clarify the rules and expectations for discussions at the outset.
  Define what you think of as a successful discussion (for example, one that includes participation by all group members, stays on topic, and explores issues in depth and from a variety of perspectives.) Make it clear that good discussions rarely happen without effort.

- Be the moderator of the first few discussions as your students learn proper protocol. Then teach your students how to moderate a discussion, and have different students take turns being moderators.

- Plan and prepare the discussion.
  Develop clear goals and a specific plan for each session. Compose specific questions that will move the discussion forward, illuminate major points, and prompt students to offer evidence for their assertions and to consider other points of view.
  - Select a question which is focused enough that students can make a start to answer it. The question should be an upper level kind of question (Bloom's taxonomy), and should be divergent and have more than one answer possible.

Throughout the Discussion

- At appropriate points in the session, summarize the major ideas and write them on the board.
- Combine discussions with other methods.
  Different methods could be used together to increase the learning of students. For example, a brief lecture to introduce the topic, assignments to be done at the end of the discussion could be used effectively to enhance the use of discussions.
- Integrate student responses into the discussion without making the discussion merely a student-teacher interaction.
  Ask students to respond directly to one another's ideas.
- Use verbal and non-verbal cues to encourage participation.
  Make eye contact and move around the room to engage the attention of all the students and to communicate that you expect each of them to participate.
- Ensure participation of the students
  The aim of the discussion is not to bring students around to your way of thinking, but rather to create the opportunity for students to think critically—

to question assumptions, to consider multiple viewpoints, and to develop knowledge of the subject. Actively seek contributions from as many students as possible in a given session; if a few students want to speak all the time, remind them that you value their contributions but would like to hear from others as well.

- Show respect for all questions and comments.
  Listen carefully. Thank students for their contributions. Point out what is valuable about your students' arguments, whether or not you agree with them. Develop helpful responses to incorrect answers or comments that are not sufficiently related to the issue currently being discussed. Take students' ideas seriously: help them clarify their thinking by asking them to provide Do not answer your own questions.
  Give students 5-10 seconds to think and formulate a response. If 10-15 seconds pass without anyone volunteering an answer and the students are giving you puzzled looks, rephrase your question. Do not give in to the temptation to answer your own questions, which will condition students to hesitate before answering to see if you will supply "the answer." Patience is key; do not be afraid of silence. The longer you wait for students to respond, the more thoughtful and complex their responses are likely to be.

After the Discussion

- It is important to summarize the discussion.
  - The lecturer can summarize the main points arising from the discussion. This is very important as the outcome of the discussion may not be very clear to the students.
- It is also possible to get two or three students to summarize the discussion. Each one can summarize a different point of view.
- If you have had the discussion at the beginning of the unit, you could have students list some topics they need more information on to make a proper decision. Then you can set up lessons or assignments incorporating their suggestions.

- Rethink, retool, revise
  Each time you facilitate a discussion, you learn something about how best to approach the topic. Take brief notes on how each discussion went and use these as the basis for reorganizing your plan for the discussion, improving your presentation skills, rethinking the material included, or developing ideas for future teaching and research projects. Include these notes in your file for the course so that they are readily accessible the next time you teach the course.

http://www.usask.ca/education/coursework/mcvittiej/methods/discussion.html

Different ways of conducting a discussion

A discussion need not be just one that is carried out around a table. Given below are some creative techniques for discussion teaching prepared by Professor David Dunne as reported at http://www.teaching.utoronto.ca/Assets/CTSI+Digital+Assets/PDFs/discussion-teaching.pdf

Buzz Groups: Students form pairs, or groups of four or five, to discuss issues from a reading assignment. Questions may or may not be assigned by the instructor and the groups can be allowed 5-15 minutes depending on the complexity of the issues.

Poster Tour: Groups of students record their discussion on a flip chart or on the chalkboard. At the end of the allotted time, groups tour all posters in the room.

Rotating Stations: Groups discuss an issue for ten minutes, and switch positions, leaving their flipchart behind. The discussion then continues, with each group using the flip chart as a new basis for discussion. As an alternative technique, groups can stay in place and trade one or more members.

Snowballing: This technique involves progressively expanding groups. Students prepare a question alone, then discuss it with a partner, then join another pair to form a group of four, then eight, and so on until the whole class has been brought together.

Jigsaw: Students become "experts" by researching a topic, and explain it to other students in class. For a class of 25, about 5 topics would be assigned and each student would choose one to research. In class, students who have chosen the same topic gather to raise questions and explore areas of understanding/ misunderstanding. Now groups are formed that include at least one expert on each topic; students take turns to lead discussion in the groups.

Critical Debate: Students are asked to vote, by a show of hands, on a contentious issue. They are then asked to form a debating team favoring the opposite side to the one they voted for. Each team elects a spokesperson and the debate ensues. The debrief focuses on what new ways of thinking were opened up, the strengths and weaknesses of their own and others' positions, etc.

Drawing Discussion: Students are supplied with flip chart sheets, pens, rulers, scissors and tape. They are asked to provide a visual representation of the important themes in their discussion. They are encouraged to be creative and playful while maintaining an underlying seriousness about the ideas they want to communicate.

E-Mail/Online Discussion: Students are asked to comment on a topic online. The lecturer can assign a topic and students have time to reflect and read about it before commenting. In one approach, the lecturer explains that each student is expected to make some sort of online contribution each week. Students may initiate a topic or respond to topics raised by others. As the term proceeds, students are expected to play the role of both initiator and respondent.

Topic 03: Case Studies

1. **Aim :** To teach about case studies so that the University teachers could use them more effectively to enable the development of critical thinking, collaboration skills and problem solving in university students.

2. **Learning Outcomes:** Participants would be able to
    - Accept the use and importance of case studies as a teaching tool in many disciplines
    - Briefly explain the advantage of case studies to promote abilities such as critical thinking, collaboration skills, and creative problem solving
    - Appreciate the relevance of this teaching method to prepare students for the real working world
    - Choose or prepare a case study
    - Run a case study

3. **Duration**: 75 Minutes

4. **Teaching / Learning Resources:** Case study, white board, lap-top computer, multi-media projector

5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
3.1	Ask what some of the most popular and expensive Masters programs are. Bring out the fact that MBAs are in great demand. - Ask what is the most common teaching method used in highly accepted MBAs. Bring out the fact that it is the Case Study method. Define the case study method. Highlight the importance of Case studies	Q & A VE		5

3.2	Break up the participants into groups of 8 to 10. Ask them to go through the case study given (or some other appropriate case study).	GpDn	CS	12
3.3	Ask the groups to reflect on what they learnt. Bring out the 'non-technical' advantages of learning through case studies. For example; - Better understanding of situation - Reflecting on issues - Critical thinking - Increasing collaboration skills - Value of comments from different persons - Greater amount of alternatives proposed - Better criteria for selection amongst alternatives - Better selection of solution - Creative problem solving - Better preparation for real work experience	GpDn	WB	20
3.4	What are some of the major allegations about the training of undergraduates by employees? - Bring out shortcomings in relation to their lack of readiness for real life work - Highlight the importance of case studies in preparing students better equipped to handle real work situations - Bring out its role in developing the confidence within the students, and the importance of this.	BS		10
3.5	Preparation of a case study - Be prepared with every aspect of the case study	VE	MM	10

	- Different types of case studies Bring out the factors that need to be considered in the writing of a case study. - Inclusion of cases with real work world issues - Applying theory to real world issues - Provide the information necessary for the case - Questions should be formulated to bring out the desired results			
3.6	Use of a case study - Running the case study - Divide into small groups - Hand out the case and give sufficient time to read - Create a classroom situation to stimulate thinking and creativity - Ask the groups to make assumptions if needed, and to note them Discussion of the case study - Determine the appropriateness of the analyses and point out any improvements if needed - Bring out the alternatives discussed, and the criteria for selection - Discuss the variability of the solutions, and the appropriateness of each	VE Dn	MM	10
3.7	Summary Request the groups to indicate the main points	TSm		5

6. Assessment: Write or choose a case study, with a lesson plan on how it will be used.

7. Essential Reading:

http://www.stanford.edu/dept/CTL/cgi-bin/docs/newsletter/case_studies.pdf

8. Supplementary Reading

http://www.materials.ac.uk/guides/casestudies.asp

http://sciencecases.lib.buffalo.edu/cs/teaching/

Additional Material:

Example of a case study that could be given

First Week on the Job

(A true story)

A newly recruited officer reported for duty at Peradeniya, to his superior officer. The first assignment given to the new recruit was to make an inventory of all inventory items belonging to the division. The superior officer provided guidelines to do the work and the new recruit immediately began his work. On the 8th day after being given the assignment, the new recruit presented the inventories to his superior officer saying that the assignment was completed. Immediately, the chief got his office staff to check inventory and after checking three times, using ten items each time, it was found that the entries were perfect. The chief then told the new recruit that if this assignment was given to some other person that he would have taken six months to complete the task. On the same day the new recruit was transferred out of the division to Moneragala.

Questions:

1. Do you think that the new recruit accomplished his task effectively?
2. What would have been the reasons for the transfer?
3. If you were the superior officer, what would have been your response?
4. If you were the new recruit what would you have done?

Supplementary Readings

These readings are from the sources indicated. Minor modifications and reorganization of the material has been done in some cases.

http://www.faculty.irsc.edu/FACULTY/.../GaglianoTeachingReferencePage.doc

A case study incorporates an issue that presents a problem. The students are then challenged to find the problem, identify where the problem started, and attempt to solve the problem.

Case studies can be used to teach in many areas. A law case, an ethical issue, a disease process, and a writing method can be taught via the case study method. The case study can be presented as a narrative, a dialogue, a video clip or movie, a television show, and an audio tape. The presentation method for case studies is dependent on the creativity and innovation of the teacher.

http://www.stanford.edu/dept/CTL/cgi-bin/docs/newsletter/case_studies.pdf

Teachers interested in involving their students more fully in classroom discussion have found that case studies can provide a rich basis for developing students' problem solving and decision making skills. While the curricula at business, law, and medical schools have for many years been based on the analysis of real world cases, professors in a variety of disciplines have been finding that an occasional case study can help them assess students' ability to synthesize, evaluate, and apply information and concepts learned in lectures and texts. Cases can help us organize and bring to life abstract and disparate concepts by forcing students to make difficult decisions about complex human dilemmas.

What is a Case Study?

The term ‘case study’ covers a wide range of problems posed for analysis, but most types include several key elements. Most cases are either based on real events, or area construction of events which could reasonably take place. They tell a story, one involving issues or conflicts which need to be resolved—though most case studies do not have one obvious or clear solution. The information contained in a case study might be complex (including charts, graphs, and relevant historical background materials) or simple—a human story that illustrates a difficult situation requiring a decision. Traditional case studies in fields such as economics, public policy, or international affairs can contain detailed historical information, including statistical data, relevant legal or governmental policy, and the arguments by various agencies for actions to be taken. But case studies are increasingly being written from a more personal perspective, involving real characters in actual situations.

Goals

As with other teaching methods, the effective use of case studies requires instructors to determine the specific goals they hope to accomplish. In general terms, cases can assess the application of concepts to complex real world situations, including building analytic skills that distinguish high priority from low priority elements. Working in groups on cases also helps students develop interpersonal skills and the capacity to work in a team—goals that some instructors rate highly and evaluate. Cases also help students make connections between what they might otherwise consider to be separate disciplines—for example, they see the need to draw upon principles in economics, environmental studies, and ethics to solve a problem in urban planning, or the need to use historical, philosophical, and sociological materials to make a decision about carrying out an anthropological project.

Writing or Finding Case Studies

While creating an effective case study can be time consuming, basing cases on actual events or experiences can help limit the initial investment of time. As historians or physicists or philosophers, we have confronted complex issues in our own research or teaching that can often naturally lead to a story others will profit from. Turning experiences into cases can be as simple as outlining the major components of a problem to be solved, or can require gathering materials that are necessary background to the circumstances students will find themselves in as decision makers. Most case writers advise experimenting, and sharing cases with colleagues for comments and suggestions. Often, cases need revision after you've taught them once or twice and discovered their strengths and weaknesses.

Because the case study method is now being used in many disciplines, relying on published cases can save preparation time.

Preparing to Use a Case Study

Students will need clear instructions on what their responsibilities are in preparing to discuss a case in class. If students can depend entirely on the information present in the case to develop solutions (and do not need to do extra research), let them know. And if supplementary research is required, emphasize this and give directions on what might be appropriate sources of information. Some instructors prepare a set of questions ahead of time, and pass these out in order to give students a general sense of the major issues to be discussed. In addition, students are often asked to prepare a brief statement outlining their sense of the central problem and their plans for resolving it. Some instructors have found it useful to have students form study groups to analyze and prepare comments before the class discussion takes place.

In the same way that students prepare a case, it's important that the instructor knows the directions the discussion might take. Since one of the goals of teaching with a case is to monitor students' ability to apply knowledge and principles to real experiences, it's useful to identify the handful of major concepts that students should be relying on.

Teaching with a Case

Case studies usually generate animated class discussion, especially if students feel that the case will serve as a basis for wide-ranging exploration. A good classroom atmosphere will help generate and sustain students 'participation and this atmosphere can be quickly created by setting some ground rules for participation. Instructors can emphasize that the analysis will be a group project, and that no one will be criticized for raising naive questions or uncertainties. The group must recognize the significance of cooperation in working toward the goal of making sense of the problem, and that everyone is required to actively work together on the analysis. Without a clear sense that they are free to experiment with hypotheses, students will tend to remain silent until they feel that the 'right' answer has been identified.

As preeminent case study teacher C. Roland Christensen points out in his analysis of case discussion, student involvement develops on at least three distinct levels: "At the first level, students explore a problem by sorting out relevant facts, developing logical conclusions, and presenting them to fellow students and the instructor. The students discuss someone else's problem; their role is that of the commentator-observer in a traditional academic sense". On the second level, students can be assigned roles in the case, and take on perspectives that require them to argue for specific actions from a character's point of view, given their interests and knowledge. Finally, on the third level, students will take the initiative to become fully involved, so that topics are no longer treated as abstract ideas, but become central to the student's sense of self—of what they would choose to do in a specific real world situation. Given the complexity of many cases, it's useful to begin class discussion with questions that require students to review and organize information on the first level: what are the relevant facts and how do they translate into major themes or issues. Once students have agreed on the most significant information in the case, you can begin to pose more challenging questions.

Once the basic information in a case has been reviewed, discussion can center on objectives and solutions. Good discussion can be generated by the kinds of questions that you ask to make sure that all the angles of the case are carefully considered. Open-ended questions are especially useful, because they demonstrate that you don't have a predetermined conclusion that you're aiming for. It's also important to ask exploratory and relational questions—questions that probe into the reasoning behind conclusions, since some students may want to jump quickly to a solution without carefully examining the evidence or their assumptions. As students identify key concerns, these can be listed on the board for future reference—along with a separate list of possible actions. As a facilitator, you can organize the discussion by seeing if the class is satisfied that each of these action recommendations is discussed fully before moving on to the next. As in all discussion leading, it's important to listen carefully to students' responses, paraphrase when necessary, and give students sufficient time to reflect on questions or issues that are raised. Of course, leading discussion on a case can be difficult at times. Students uncomfortable with ambiguity and interested solely in having the instructor offer up appropriate facts and truths may be unwilling to participate. Some students may also fear suggesting inadequate solutions, and so wait until someone else figures out 'the right' response. And even if the discussion is lively, the open ended nature of a case can sometimes lead the discussion on tangents that are inappropriate. But by preparing students well for what is expected of them, and then by preparing yourself with good questions, these difficulties can be minimized or eliminated.

Wrapping Up

Summarizing a class discussion on a case should focus not only on the content of the case, but also on the process of analysis and evaluation. You can take charge at this point and offer an assessment of the case, or you can ask the students themselves to pull together the various strands of the discussion. If some issues weren't resolved fully, or if answers to questions seemed to demand more information, students can be assigned research tasks for the next class session. And to get the most out of this kind of class discussion, it's helpful to give your students feedback on how you think the discussion itself went—that is, on how you

saw the group interact and progress. This is especially useful if once you've taught a case, it's helpful to reflect on students' responses, to see if the case can be developed further, or whether more background information can or should be provided. Sometimes a new case will seem to naturally spring from the first, so that a single complex issue can be developed into several phases that students analyze over the course of a quarter. You can even invite students to participate in the creation of the next installment, and build the case's story for use in future classes. Using cases can be an invigorating approach to teaching, and can help your students take much more responsibility for their own learning in your class. But because cases are not necessarily the best way to communicate large amounts of new information, they should not be seen as replacements for lectures. And in this sense they are probably not always appropriate for introductory level classes, since students usually need a good deal of background knowledge to be able to adequately interpret and resolve a case. What cases can do that lectures can't is test to see whether students are capable of using the information that they've been studying in your discipline. By placing students in real situations, and asking them to make critical decisions, case studies force students to connect their knowledge of facts with the need for evaluative skills. And perhaps this connection is one of the most important we can demonstrate for students, for as Alfred North Whitehead notes, "The details of knowledge which are important will be picked up ad hoc in each vocation in life, but the habit of the active utilization of well understood principles is the final possession of wisdom."

Topic 04: Role Play

1. **Aim:** To teach about role-plays so that the University teachers could use them more effectively to enable the development of appropriates attitudes and values in university students.

2. **Learning Outcomes:** Participants would be able to
    - Value the importance of role-plays in having an impact on the affective domain
    - Discuss the importance of role-playing to gain insights into feelings, develop appropriate attitudes, and embed them deeply in the students
    - Select a section from the discipline they teach for which a role-play would be effective
    - List the steps in conducting a role-play
    - Conduct a role-play

3. **Duration**: 75 Minutes

4. **Teaching / Learning Resources:** Role specifications, cards, blu-tack, lap-top computer, multi-media projector

5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
4.1	Ask a trainee, preferably one who is generally silent, to play the role of the teacher and summarize the class at the end. Ask him/her to jot down any notes for this during the class.	TA		
4.2	Ask how important it is to develop certain attitudes in students. Ask whether it is easy to do. Ask what methods are used to develop the needed attitudes.	Q & A		5

4.3	Select a short appropriate role play and do it. One possibility is as given below: Objective of this role play is to show the importance of patience, and understanding in a teacher. There are 2 players. A teacher and a student (ask them to assume an AL student to make it a little bit less threatening…) Teacher: to question the student about an assignment given. Student: To act in a very frightened manner, giving answers that he/she is not sure of the answer. Teacher: To keep on prodding for answers. Gradually getting angrier and angrier. Student: Keeps on getting more and more on the defensive, shows more and more signs of being intimated. Teacher: Finally really scolds the student, almost in language that should not be used. Stop the role play at this stage. Ask whether this type of behavior is appropriate. Say that even though this might seem an extreme case, that it is quite possible for it to happen in a number of cases in workplaces, factories, offices, schools, hospitals and even Universities ! Ask the 'student' to explain how he/she **felt**. Ask the observers to explain how they **felt**. Ask the 'student' and the observers whether they feel it is right to act in that way.	TA	Role speci-ficat-ions	15

	Ask whether this is a more forceful way of having an impact on attitudes.			
4.4	Ask students, and post their responses on cards on the white-board. Advantages - Enables exploration of own feelings - Gains insights into attitudes and perceptions - Enables empathy with position and feeling of others - Embeds concepts - Makes some theoretical concepts more real and relevant - Prepares students for better social interactions Disadvantages - Could need a fair amount of time - 'Subject matter' that could be covered is limited	BS	Cd	15
4.5	Types of issues that could be addressed: - Individual dilemmas - Interpersonal conflicts - Intergroup relations	VE	MM	10
4.6	Steps in conducting a role play - Warm up - Select participants - Set the stage - Prepare the observers - Play the roles - Discuss - Generalize	Q & A	MM	10

4.7	The trainees to write down at least one instance in which a role play is used/could be used in their teaching. Some of the trainees to share current use or possibilities.	IN TS		7
4.8	Summary Ask the previously selected trainee to play the role of the teacher and summarize the class.	TA		5

6. Assessment

Identify learning objectives that could be achieved through role-playing. Create a role-play suitable to achieve the development of the selected objectives.

7. Essential Reading

http://www.scribd.com/doc/26109576/Role-Play-As-A-Teaching-Method-A-Practical-Guide

8. Supplementary Reading

http://imet.csus.edu/imet3/odell/portfolio/grartifacts/Lit%20review.pdf

Supplementary Readings

These readings are from the sources indicated. Minor modifications and reorganization of the material has been done in some cases.

http://library.unesco-iicba.org/English/SECONDARY_SCIENCE_SERIES/a_practicle_guide_to_teaching/edukit_chapter_5.html

Role Playing

> On its simplest level, role playing is a way to deal with problems through action - a problem is identified, acted out, and discussed. Some students can be role-players, others observers. As pointed out by Joice& Wells, the role playing process provides a live sample of human behavior that allows

students to: (1) explore their feelings; (2) gain insight into their attitudes, values, and perceptions; (3) develop their problem solving skills; and (4) explore subject matter in varied ways.

Role playing emphasizes not only intellectual content, but also emotional aspects of daily life. It provides a possibility to explore students' feelings, which they can recognize, understand, and perhaps release.

Several **types of social problems** can be explored through role playing, including:

Individual dilemmas: These arise when a student is caught between two contrasting values or between his/her own interests and the interests of others. Role playing makes this dilemma accessible to children and helps them understand why it occurs and what to do about it.

Interpersonal conflicts: A major use of role playing is to reveal conflicts between people so that students can discover techniques for overcoming them.

Intergroup relations: Intergroup problems arising from ethnic, racial, or cultural stereotyping or from authoritarian beliefs can be explored through role playing. In this context, role playing can uncover stereotypes and prejudices and help students understand reasons for conflict situations.

Historical or contemporary problems: These include critical/emergency situations in past or present which influence the personal lives of children.

As suggested by Shaftels, role playing activity consists of the following nine steps: (1) warm up the group; (2) select participants; (3) set the stage; (4) prepare observers; (5) enact; (6) discuss and evaluate; (7) reenact; (8) discuss and evaluate; and (9) share experiences and generalize. Each of these steps has a specific purpose that contributes to the focus of learning activity. Together, they ensure that a line of thinking is pursued throughout

the complex of activities that students are prepared in their roles, which goals for the role playing are identified, and that discussion afterwards provides a meaningful conclusion. These phases and activities are summarized in the role playing guide given below.

PRACTICAL SUGGESTIONS: Role Playing Guide

On its simplest level, role playing is a way to deal with problems through action - a problem is identified, acted out, and discussed. Some students can be role-players, others observers. As pointed out by Juice& Wells, the role playing process provides a live sample of human behavior that allows students to: (1) explore their feelings; (2) gain insight into their attitudes, values, and perceptions; (3) develop their problem solving skills; and (4) explore subject matter in varied ways.

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PRACTICAL SUGGESTIONS: Role Playing Guide

Phase 1: Warm up the group Identify or introduce problem. Make problem explicit. Interpret problem story, explore issues. Explain role playing

Phase 2: Select participants Analyze roles. Select role players. Select observers

Phase 3: Set the stage Set line of action. Re-state roles. Discuss problem situation

Phase 4: Prepare the observers. Decide what to look for. Assign observation tasks

Phase 5: Enact Begin role play. Maintain role play. Break role play

Phase 6: Discuss and evaluate Review action of role play (events). Discuss major focus (Was it realistic?) Develop next enactment

Phase 7: Reenact Play revised roles. Suggest next steps or behavioral alternatives

Phase 8: Discuss and evaluate As in phase 6

Phase 9: Share experiences and generalize Relate problem situation to real experience and current problems. Explore general principles of behavior.

From: Joice& Wells, 1996

Lesson Planning and Instructional Teaching Methods for Undergraduate Teaching

1	Module Title	Module 3: Classroom Teaching and Learning
2	**Module Duration**	6 hrs 15 min (375 min)
3	**Prerequisites and Co-requisites**	Engage in teaching (e.g. conduct lessons in theory and practical) for undergraduate study programs and followed module 1 of this manual
4	**Module Aims**	To teach the principles and practice of classroom teaching, so that participants will be able to use them in planning and delivering lessons effectively in the classroom to suit their teaching/learning situation.
5	**Objectives and Learning Outcomes**	• Plan lessons with due consideration to target group, training need and expected outcome • Use a range of training methods to generate active teaching/learning in the classroom • Plan, demonstrate and assure the learning of skills/ practical • Use questions and answers as a technique to ensure inquiring and analytical skills in learners
6	**Assessment Strategy**	One or a mix of Assignments and/or Portfolio
7	**Syllabus**	• Lesson Planning • Active Instruction Techniques • Practical/Skills Teaching • Question and Answer • Classroom Assessment Techniques

Topic 01: Lesson Planning

1. **Aim:** To teach the importance and method of developing a lesson plan, so that the University teachers would realize its value, and also be able to produce good lesson plans.

2. **Learning Outcomes:** Participants would be able to

    - Endorse the need of lesson plans for effectively teaching their students
    - List the components of a lesson plan
    - Choose a good motivator/s
    - Propose good strategies to facilitate understanding in students
    - Briefly explain at least 10 micro-teaching methods
    - Produce a lesson plan

3. **Duration**: 75 minutes

4. **Teaching / Learning Resources:** White Board, lap-top and multi-media projector

5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
1.1	Discuss the results of going on a field trip without any planning. Bring out the fact that planning is essential to plan in detail for success of the field trip. And similarly for many other aspects too. Ask whether we plan in detail for our classes. Bring out the results of the lack of planning, and impress the need of plans for success. Could relate to their need to be good and successful teachers too.	Dn		7

1.2	Content of a Lesson Plan Bring out the relevant components of a lesson plan. Title, target group and number, objectives, main teaching method, introduction, main content, summary, time allocations, micro teaching/learning methods, teaching-aids and resources. Show a Lesson Plan (LP)	BS Vi E	WB Visual of LP	8 3
1.3	Generate the steps in lesson planning - Writing objectives - Introduction - Main body of the lesson - Conclusion - Specific teaching activities - Time allocation - Resources	Q & A	WB	5
1.4	Micro Teaching Methods Distinguish between the main teaching methods and micro-teaching methods Generate possible micro-teaching methods Explain additional micro-teaching methods (See additional reading for list of micro methods)	Q & A BS VE	WB MM **HO**	15
1.5	Trainees to select 2 or 3 micro teaching methods they have not used, but they can use. To think of specific instances where these could be useful. Some trainees to share their ideas with the rest.	SN SS		10
1.6	Pros and cons for using lesson plans Advantages - Determination of objectives beforehand - Helps selection of content to meet required	Dn	WB	15

	level - Better able to select more suited teaching methods - Better preparation for class - More effective teaching - Enable more focused assessment of students - Enables a substitute teacher to teach the class more easily Disadvantages - Lesson could be very rigid - If used rigidly, may seem not be flexible enough to capture an important current event			
1.7	Summary - Advantages - Content	TSm Vi E	Visual of LP	5

6. Assessment: Submission of an acceptable lesson plan for the micro-teaching session.

7. Essential Reading:

http://www.crlt.umich.edu/gsis/p2_5

8. Supplementary Reading:

http://www.personal.psu.edu/scs15/idweb/lessonplanning.htm

Additional Reading

Micro Methods

A micro method, as used in this manual, is a teaching activity during the lesson, such as the teacher explaining with words (referred to as VE or Verbal Explanation). The different micro-methods are described in the following section.

Abbreviation	Term	Description	Example
As	Assignment	An activity to be done by the students, basically on their own, and often outside class periods. However, in a few instance there will be assignments within the class too. Difference from practicals being that this is more knowledge based and within the class room.	Writing a term paper.
BS	Brainstorm	Generate views from the students without any initial discussion of the ideas which could inhibit the flow of ideas. The discussion could take place later.	Ask what are the factors contributing to poverty in a specific area (e.g. rural / estate/slum). Let the initial views come from the trainees.

Demo	Demonstra-tion	The teacher to show each step of the practice very carefully. Ideally the demonstration should be repeated if time and resources permit.	Doing a procedure in a laboratory.
Dn	Discussion	The obtaining and elaboration of views of the trainees in a conducive environment. These views / experiences to be used to guide the discussion to achieve the lesson objectives.	To bring out the observations of the trainees of some activity (for example, a field visit)
Exp	Experiment	Simple experiments. Often the comparison of the preferred activity (e.g. plant with compost), with a control (e.g. plant with no compost).	Cover a plant fully so that it will not get light and observe after some time.
FV	Field Visits	Excursion to outside industry, organization, farm.	Visits to an organization.
FO	Field Observation	Critically look at relevant aspects when going on a field visit.	Observing and asking relevant questions when visiting an industrial site.
GpA	Group Activity	Activity undertaken by the group.	A video production by the students.

Gp As	Group Assignment	Assignment given to a group of students.	Giving a problem that the group has to understand and propose solutions for.
GpDn	Group Discussion	Discussion in a group.	A discussion by students, in groups, on factors causing environmental pollution.
GpM	Group Maintenance	The group to maintain an activity.	Maintaining crops grown by the students.
GpP	Group Practice	The activity to be done as a group.	Practice for a drama.
GpPrsn	Group Presentation	Presentation of the group work, to the other groups and teacher. The use of a visual aid such as a poster, or computer presentation, would facilitate this process.	Presentation of the findings of group discussion.
IN	Individual Noting	Students individually thinking of response, deciding, and noting it down prior to responding.	What is a good teaching method for developing attitudes?
MD	Model Development	Using student input collect related concepts on cards, post on board, then	Development of the phases in

		rearrange to build a conceptual model.	learning.
Ob	Observation	Thoughtful observation of some activity or location.	Observation of a role play.
O & R	Observe & Record	See (for example changes in a plant over time), and write observations in a field record book.	Observe and record plant pests and diseases.
Pr	Practical	A practical considered as a micro-method when the practical is embedded as part of the lecture.	Using a computer application.
Prsn	Presentation	Students to explain to an audience.	Presentation of a group discussion.
Q & A	Question & Answer	The trainer to ask questions, the trainees to respond. The responses to be used to move on to the next segment of the session. Trainer to facilitate answering by creating an appropriate learning environment.	Ask, "What are the factors affecting poverty in rural areas?" Use the responses to help students to understand the situation better and/or to move on to possible interventions.
SR	Silent Reflection	The trainer to ask a question and ask the student to think about it, but not give a response	When you are 70 years old and look back on life, what are the three most important things

		immediately.	that you would have liked to have achieved?
TA	Trainee Activity	Any other student activity that has not been specifically identified under this list of micro-methods.	Trainees to draw posters.
TG	Trainee Guidance	The teacher to be in the background (let us say in a discussion), but to gently provide the guidance at appropriate times to achieve the desired goal of that session.	In a farmer training program conducted by the students, to give guidance at appropriate times.
TP	Trainee Practice	The students to do what was shown by the teacher in the corresponding demonstration.	Trainees to actually do an experiment.
TRd	Trainee Reading	Students to read relevant material before the class period.	The Lecturer to provide prior instructions to read a specific section of a chapter to be prepared for a discussion.
TRdL	Trainee Reading Later	Students to read the material later after the class.	Students to read material referred to in class later during their study time.

TS	Trainees' Sharing	Student's sharing their views with the other students.	Sharing problems they face in the University.
TSp	Trainee Supervision	Constant supervision of the students	Supervising the construction of a prototype.
TSm	Trainee Summary	Students to summarize the session by bringing out the main points. Initially the trainer will have to guide this process.	The student to bring out the main points of that particular class.
TC	Teacher confirmation	Teacher to confirm that the procedures, identification etc. of the trainee is correct.	Confirm that the pest / disease diagnosis is correct.
VE	Verbal Explanation	The teacher to make clear, by defining, expanding, clarifying, comparing, using analogies and examples etc. Often this is enhanced with the use of teaching aids.	Explain how price is affected by the demand and supply curves.
Vi E	Visual Explanation	Explanation mainly by the use of visuals.	Use of a video to show the effects of environmental pollution.
VS	Verbal Summary	State the main points of the session in words.	Very briefly restate what was meant by the main concepts covered in class.

Whatever the method used, it is strongly recommended that a more trainee centre approach be used as opposed to a trainer centered approach. A trainer centered approach is like a traditional lecture where the trainer does all the talking with hardly any input from the trainee. In such situations the trainees are very passive and learning does not take place very well. In a trainee centered approach efforts are made to get the trainee involved to a greater extent. Getting them involved in practical's and discussions are clear. However, even in a lecture, efforts should be made to get them involved by asking questions, asking about their experiences or views etc. Then they are more likely to be involved in the class and actually actively think about what is being taught. It is only then, that they will learn better.

Supplementary Readings

These readings are from the sources indicated. Minor modifications and reorganization of the material has been done in some cases.

http://www.crlt.umich.edu/gsis/p2_5

Strategies for Effective Lesson Planning

StilianaMilkova
Center for Research on Learning and Teaching

Definition

A lesson plan is the instructor's road map of what students need to learn and how it will be done effectively during the class time.

Advantages

Careful lesson planning can help to ensure the successful running of your courses. Incorporating best practices in teaching and learning into the design process will help students meet learning objectives for your course.

http://www.personal.psu.edu/scs15/idweb/lessonplanning.htm

Main components

Before you plan your lesson, you will first need to identify the learning objectives for the class meeting. Then, you can design appropriate learning activities and develop strategies to obtain feedback on student learning. A successful lesson plan addresses and integrates these three key components:

- Objectives for student learning
- Teaching/learning activities
- Strategies to check student understanding

Specifying concrete objectives for student learning will help you determine the kinds of teaching and learning activities you will use in class, while those activities will define how you will check whether the learning objectives have been accomplished.

Steps for Preparing a Lesson Plan

Below are six steps to guide you when you create your first lesson plans. Each step is accompanied by a set of questions meant to prompt reflection and aid you in designing your teaching and learning activities.

(1) Outline learning objectives

The first step is to determine what you want students to learn and be able to do at the end of class. To help you specify your objectives for student learning, answer the following questions:

- What is the topic of the lesson?
- What do I want students to learn?
- What do I want them to understand and be able to do at the end of class?
- What do I want them to take away from this particular lesson?

Once you outline the learning objectives for the class meeting, rank them in terms of their importance. This step will prepare you for managing class time and accomplishing the more important learning objectives in case you are pressed for time. Consider the following questions:

- What are the most important concepts, ideas, or skills I want students to be able to grasp and apply?
- Why are they important?
- If I ran out of time, which ones could not be omitted?
- And conversely, which ones could I skip if pressed for time?

(2) Develop the introduction

Now that you have your learning objectives in order of their importance, design the specific activities you will use to get students to understand and apply what they have learned. Because you will have a diverse body of students with different academic and personal experiences, they may already be familiar with the topic. That is why you might start with a question or activity to gauge students' knowledge of the subject or possibly, their preconceived notions about it. For example, you can take a simple poll: "How many of you have heard of X? Raise your hand if you have." You can also gather background information from your students prior to class by sending students an electronic survey or asking them to write comments on index cards. This additional information can help shape your

introduction, learning activities, etc. When you have an idea of the students' familiarity with the topic, you will also have a sense of what to focus on.

Develop a creative introduction to the topic to stimulate interest and encourage thinking. You can use a variety of approaches to engage students (e.g., personal anecdote, historical event, thought-provoking dilemma, real-world example, short video clip, practical application, probing question, etc.). Consider the following questions when planning your introduction:

- How will I check whether students know anything about the topic or have any preconceived notions about it?
- What are some commonly held ideas (or possibly misconceptions) about this topic that students might be familiar with or might espouse?
- What will I do to introduce the topic?

(3) Plan the specific learning activities (the main body of the lesson)

Prepare several different ways of explaining the material (real-life examples, analogies, visuals, etc.) to catch the attention of more students and appeal to different learning styles. As you plan your examples and activities, estimate how much time you will spend on each. Build in time for extended explanation or discussion, but also be prepared to move on quickly to different applications or problems, and to identify strategies that check for understanding. These questions would help you design the learning activities you will use:

- What will I do to explain the topic?
- What will I do to illustrate the topic in a different way?
- How can I engage students in the topic?
- What are some relevant real-life examples, analogies, or situations that can help students understand the topic?
- What will students need to do to help them understand the topic better?

(4) Plan to check for understanding

Now that you have explained the topic and illustrated it with different examples, you need to check for student understanding – how will you know that students are learning? Think about specific questions you can ask students in order to check for understanding, write them down, and then paraphrase them so that you are prepared to ask the questions in different ways. Try to predict the answers your questions will generate. Decide on whether you want students to respond orally or in writing. You can look at Strategies to Extend Student Thinking, http://www.crlt.umich.edu/gsis/P4_4.php to help you generate some ideas and you can also ask yourself these questions:

- What questions will I ask students to check for understanding?
- What will I have students do to demonstrate that they are following?
- Going back to my list of learning objectives, what activity can I have students do to check whether each of those has been accomplished?

An important strategy that will also help you with time management is to anticipate students' questions. When planning your lesson, decide what kinds of questions will be productive for discussion and what questions might sidetrack the class. Think about and decide on the balance between covering content (accomplishing your learning objectives) and ensuring that students understand.

(5) Develop a conclusion and a preview

Go over the material covered in class by summarizing the main points of the lesson. You can do this in a number of ways: you can state the main points yourself ("Today we talked about…"), you can ask a student to help you summarize them, or you can even ask all students to write down on a piece of paper what they think were the main points of the lesson. You can review the students' answers to gauge their understanding of the topic and then explain anything unclear the following class. Conclude the lesson not only by summarizing the main points, but also by previewing the next lesson. How does the topic relate to the one that's coming? This preview will spur students' interest and help them connect the different ideas within a larger context.

(6) Create a realistic timeline

GSIs know how easy it is to run out of time and not cover all of the many points they had planned to cover. A list of ten learning objectives is not realistic, so narrow down your list to the two or three key concepts, ideas, or skills you want students to learn. Instructors also agree that they often need to adjust their lesson plan during class depending on what the students need. Your list of prioritized learning objectives will help you make decisions on the spot and adjust your lesson plan as needed. Having additional examples or alternative activities will also allow you to be flexible. A realistic timeline will reflect your flexibility and readiness to adapt to the specific classroom environment. Here are some strategies for creating a realistic timeline:

- Estimate how much time each of the activities will take, then plan some extra time for each
- When you prepare your lesson plan, next to each activity indicate how much time you expect it will take
- Plan a few minutes at the end of class to answer any remaining questions and to sum up key points
- Plan an extra activity or discussion question in case you have time left
- Be flexible – be ready to adjust your lesson plan to students' needs and focus on what seems to be more productive rather than sticking to your original plan

Presenting the Lesson Plan

Letting your students know what they will be learning and doing in class will help keep them more engaged and on track. You can share your lesson plan by writing a brief agenda on the board or telling students explicitly what they will be learning and doing in class. You can outline on the board or on a handout the learning objectives for the class. Providing a meaningful organization of the class time can help students not only remember better, but also follow your presentation and

understand the rationale behind in-class activities. Having a clearly visible agenda (e.g., on the board) will also help you and students stay on track.

Reflecting on Your Lesson Plan

A lesson plan may not work as well as you had expected due to a number of extraneous circumstances. You should not get discouraged – it happens to even the most experienced teachers! Take a few minutes after each class to reflect on what worked well and why, and what you could have done differently. Identifying successful and less successful organization of class time and activities would make it easier to adjust to the contingencies of the classroom. For additional feedback on planning and managing class time, you can use the following resources: student feedback, peer observation, and viewing a videotape of your teaching.

Conclusion

To be effective, the lesson plan does not have to be an exhaustive document that describes each and every possible classroom scenario. Nor does it have to anticipate each and every student's response or question. Instead, it should provide you with a general outline of your teaching goals, learning objectives, and means to accomplish them. It is a reminder of what you want to do and how you want to do it. A productive lesson is not one in which everything goes exactly as planned, but one in which both students and instructor learn from each other.

Topic 02: Active Instruction Techniques

1. **Aim:** To teach the significance of using Active Instruction Techniques as instructional teaching methods in higher education so that teachers would be able to use them effectively in scenarios/situations where they are most appropriate.

2. **Learning Outcomes:** Participants would be able to

    - Define and express what active instruction techniques are
    - Appreciate how people learn
    - Determine the necessity for use of active instruction techniques in higher education
    - Compare how the same lesson could be conducted in the traditional lecture method vs active instruction techniques
    - Determine the role of the teacher in an active instructions class

3. **Duration:** 120 minutes

4. **Teaching/Learning Resources:**

    - Curriculum of study program
    - Details of course/s taught by participants
    - Bloom's Taxonomy

5. **Lesson Content and Methods:**

No	Content Outline	Teaching and Learning Method	Time (min)
2.1	Active Instruction Techniques ⦿ Active Instruction Techniques ↴ Real Learning	Verbal exposition	5
2.2	⦿ Perspectives on Active Instruction from Around the World	Individual activity	15

	"If you tell me I will listen, If you show me I will pay attention If you involve me, I will learn" ***Anonymous*** "Never do for learners what learners can do for themselves and for each other" ***Dave Meier*** (author of *The Accelerated Learning Handbook*) "Learning is creation, not consumption" ***Dave Meier***(author of *The Accelerated Learning Handbook*) "The mind is not a vessel to be filled, but a fire to be ignited" ***Plutarch***	Discussion	
2.3	An expression of how people learn - "We learn…….. 10% of what we read 20% of what we hear 30% of what we see 50% of what we both see and hear 70% of what is discussed with others 80% of what we experience personally 90% of what we teach to others" ***William Glasser***	Q & A Verbal exposition	10
2.4	⦿ Why be concerned about Active Instruction? because Active Instruction • Creates more engaged students • Serves students with diverse learning styles	Brainstorming	10

	• Can be used to teach any subject or age • Facilitates more real learning for students than the traditional lecture • Effectively teaches higher level concepts • Teaches how to think • Reduces class discipline problems • Teaches how to problem-solve • Enhances student communication skills • Teachers how to work in groups • Uses student-to-student peer teaching • Makes teaching more enjoyable • Leads to longer retention of what is learned	Discussion	10
2.5	A Tale of Two Classes Lesson: Farming in the First Decade of Post Independence Sri Lanka Duration: 90 minutes Subject: Sociology 101 Target Group: All first year students at a State University ◉ Traditional lecture-based class scenario • It would very likely be taught as a lecture • An instructor would speak for almost all the time duration • Probably some reference to the text would be made	Case study Role Play Discussion	10 15

	• The role of the students would be - Sit - Listen - Answer a question if called upon - Take notes if you want to • Students are not supposed to - Talk out of turn - Speak without raising one's hand - Move from one's seat		
	⦿ Active Instruction class scenario • Teacher introduces topic • Students will state their questions about the topic • Instructor gives the students an overview of what would be covered – **Advance Organizer** • Hopefully students would see some connection between the day's topic and their interests • Instructor asks groups of two students to come up with at least one question about the topic and post them on the whiteboard – **Sharing Pairs** • Every student is obligated to participate in these pairs – hard to hide • The instructor then gives a mini-lecture about the key points of the lesson to format the exploration of the topic- **Mini Lecture** • Instructor will not disseminate large amounts of information • Instructor will refer to the student generated topics on	Verbal exposition Discussion Individual activity	25

	the white board whenever possible thereby capturing the attention of those who posted the question • There will be a small session of question and answer – **Question and Answer** • A student would moderate the question and answer session with the instructor's assistance • The instructor would then make small groups in the class to discuss a topic amongst themselves • These small groups are sometimes called **Buzz Groups** because of the significant buzz of noise and activity that can come from them • After a few minutes at their task half of the small groups report back to the class- **Report Back** • This reporting leads to the students benefiting from each other's perspectives • The instructor can then ask each student to do a **Minute Write** – during this activity each student has one minute to write one or two paragraphs summarizing the main concepts they have learnt concerning the topic • An advantage of the Minute Write is its speed and usefulness in getting deep thinking and reflection to occur • The class can discuss on the outcomes of the minute – writes – **Whole Class Discussion**		

	• The instructor can now move to do a physical demonstration to get some physical movement to energize the class - **Demonstration** • Student volunteers could try to lift a 30 kg object (gunny of fertilizer) to demonstrate the daily life of farmers who contributed to food security of this country • A soft skill could then be taught by a class discussion of a **Case Study** of a farmer who decided to stay on the farm where he grew up or strike out on his own to move to town to get involved in an industry • This could lead to a **Role play** by the students who act out different ways to handle a particular situation – the outcome of the above situation • A student volunteer poses a two-question **Opinion Poll** to the students • What would farmers have done in the post independence situation • What should have been the role of the Government at that time in helping them • The instructor then asks the students to reinforce their own learning by drawing a **Concept Map** of the topics they experienced, heard, discussed and felt during the class		

	• In the above the class used thirteen different types of teaching during the 90 minutes. • In reality it is difficult to and unnecessary to put so many different methods in to a 90 min class. The example shows how student interest and learning can be increased with any amount of interactivity Take home message: • Use lecture sparingly • There are so many more active instructional methods to use!	Q & A	10
2.6	Use of Active Learning in Classes It is an accepted fact that students learn more when they are actively engaged and doing something than when they are passively receiving information. Ways to incorporate active learning in classes are as follows. • At the beginning of class-use groups, brainstorm, post problems • In the middle of the class – pause, appoint student experts, take a vote • At the end of the class -assign a one-minute paper, hold a discussion	Verbal Exposition Q & A Discussion	10

	The teacher's role in active learning is by becoming a more dynamic person – this could be achieved by • The use of an interesting opening to the class • Asking a question which is central to the material to be taught that day • Use of real life examples • Using voice effectively • Moving around the class		

5. Assessments: Design an active instruction class of 60 minutes for any lesson of a course taught with at least 6 classroom activities

6. Suggested Reading:

Scholarly articles for active instruction techniques

Active Learning: Creating Excitement in the Classroom. … - *Bonwell* - Cited by 1853

Active Learning: 101 Strategies To Teach Any Subject. - *Silberman* - Cited by 346

Promoting **Active** Learning. Strategies for the College … - *Meyers* - Cited by 859

Active learning - Wikipedia, the free encyclopedia

*en.wikipedia.org/wiki/ :**Active**_learning*

Student-Centered Teaching

www4.ncsu.edu/unity/lockers/users/f/felder/.../ :Student-Centered.html

Active learning is generally defined as any instructional method that ...
*www.everettcc.edu/.../**Instruction**/.../C.%20**ACTIVE**LEA... - United States*
Similar

File Format: Microsoft Word - Quick View[PDF]

Application of Active Learning Techniques to Computer-Based
...vision.technion.ac.il/NI/site/papers/documents/lv02_10.pdf

File Format: PDF/Adobe Acrobat - Quick View

Topic 03: Practical/Skills

6. **Aim:** To teach the significance of using practical/skills lessons as an instructional teaching method in higher education so that teachers would be able to use it effectively in scenarios/situations where it is most appropriate.

7. **Learning Outcomes:** Participants would be able to

   - Appreciate the necessity to teach skills to trainees/students
   - Prepare a lesson plan, skills analysis routine and an activity plan for any skill that has to be imparted
   - Determine aspects of preparation to teach a skill
   - Determine aspects of demonstration of a skill.
   - Determine aspects of supervision of practice of a skill
   - Determine aspects of improving the quality and performance of a skill

8. **Duration:**75 minutes

9. **Teaching/Learning Resources:**
   - Curriculum of study program
   - Details of course/s taught by participants
   - Bloom's Taxonomy
   - Manuals/guides to skills in disciplines of participants
   - Videos

10. **Lesson Content and Methods:**

No.	Content Outline	Teaching and Learning Method	Time (min)
3.1	• **Introduction to Skills Teaching** • There are many skills expected of graduates in different disciplines when they go the world of work. Hence skills taught must be relevant to the students/ trainees and to the industry. These skills are often described in terms of competencies.	Discussion Q & A	5
3.2	• **Preparation for Skills Teaching** In addition to rehearsal of the skill by the teacher,	Verbal Exposition	5

	preparation should be based on a lesson plan and a skills analysis. The latter obviously needs to be prepared once for any given skill, but the former may require modification depending on the target population. • Equipment/instruments etc should be identified and checked over before the lesson.	Q & A Individual activity	
3.3	• **Demonstration of Skill** a. Arrange for the class to see and hear - Remove distractions. Ensure they are facing the same way as you. Stand to one side. b. Establish Contact Create a suitable atmosphere for learning. c. State the aim Briefly. Give purpose of skill and relationship to previous work. Motivate! d. Show finished product If possible, an example of the end of product. e. Demonstrate at normal speed A good example, seen at correct speed, motivates and aids accurate perception. Try not to break continuity. Repeat several times if necessary. f. Demonstrate at slow speed Repeat actions slowly, emphasize and verbalize hand movements and senses employed. Explain each step, explaining the **WHY** as well as the **HOW**. Try asking questions to begin the process of reflection. g. Ask student to verbalize Break down and show parts. Get students to describe the actions. Question the class to check understanding. h. Discuss Safety You can't emphasis this too much. i. Let a student try Allow students to verbalize and discuss how their actions deviate from the demonstration. j. All student practice Check their progress, you provide feedback.	Role Play	20

3.4	**Supervision of Practice** a. Learn by doing Repetition – with feedback of results – improves performance. b. Individual attention Correct mistakes early – difficult to erase bad habits after they have been acquired. c. Introduce time and error factors Comment on accuracy, style, speed and quality. This can de-motivate for any future learning. Hence caution should be exercised when doing so. d. Give confidence Praise and reward are better than blame and punishment. Praise will motivate the student more effectively than harassment e. Watch for boredom Change of occupation and materials f. Beware of fatigue Loss of skill – bad habits result g. Encourage students to think They should not be merely copying blindly, so ask questions.	Individual activity	15
3.5	Lesson Plan sheet	Discussion	10
3.6	Skills Analysis sheet	Discussion	15
3.7	Activity Sheet (Instructor's Notes)	Discussion	5

5. Assessments: Prepare a lesson plan, skills analysis sheet and an activity sheet for any skill /practical in any of the courses taught by you for a micro teaching class of 30 min.

6. Suggested Reading:

Teaching and learning practical skills— Faculty Development
*www.faculty.londondeanery.ac.uk/.../**teaching**...**skills**/**teaching**-and-le...*[PDF]

CHAPTER 9 TEACHING PRACTICAL SKILLS

*www.col.org/SiteCollectionDocuments/**Skills**_Chapter09.pdf*Similar

File Format: PDF/Adobe Acrobat - Quick View
by C Hampton - Cited by 5 - Related articles

Teaching practical skills - ENOTHE - European Network of ...

*www.enothe.eu/index.php?page=tch/itm/**teach**meth-tps*

Topic 04: Question and Answer

1. **Aim:** To teach the significance of using questions and answers (Q and A) as an instructional teaching method in higher education so that teachers would be able to use it effectively in scenarios/situations where it is most appropriate.

2. **Learning Outcomes:** Participants would be able to

   - Determine the objectives of using questions in teaching
   - State the different types of questions and write examples for each
   - Use different methods of questioning
   - Optimize distribution of questions when used
   - Optimize techniques when using questions

3. **Duration:** 30 minutes

4. **Teaching/Learning Resources:**
   - Curriculum of study program
   - Details of course/s taught by participants
   - Bloom's Taxonomy

5. **Lesson Content and Methods:**

No.	Content Outline	Teaching and Learning Method	Time (min)
4.1	The Use of Questions in Teaching-Objectives a. gain attention b. stimulate participation and increase motivation c. develop understanding and reasoning d. challenge/guide learning e. fix facts – reinforcement f. Feedback g. test knowledge h. encourage and develop student's confidence i. develop relationship between students and teacher	Q & A Brainstorming Discussion	10

4.2	Type a. open – question has several possible answers b. closed – one answer, right or wrong	Q & A	5
4.3	Methods of Use a. Teacher initiated i. overhead – addressed to group, anyone may answer ii. directed – name used to appoint answerer QPN NQ iii. Unspecific – use with care, not too often b. as a response to a student question i. reverse – put the question back to the questioner ii. relay – put the question back to the whole group	Q & A Role Play	5
4.4	Distribution a. include all members of the group b. balance the number of questions between group members c. use questions to both challenge and encourage individuals	Discussion	5
4.5	Technique a. use short, clear questions b. give students time to think c. don't pause too long between question and nomination d. give clues and cues e. be encouraging and accepting in both f. your verbal and non – verbal behavior g. aim to develop lines of thought through question sequences h. look for a balance between persistence and persecution	Verbal exposition	5

5. Assessments: Write 10 types of questions as learnt from above and explain when and why you would use them in your lessons.

6. Suggested Reading:

Teaching Strategies

*www.assetproject.info/learner_**method**ologies/during/strategies.htm*

Questions and Answers in Teaching | Bible.org - WorldsLargest ...

*bible.org/seriespage / **questions-and-answers-teaching***

Socratic method - Wikipedia, the free encyclopedia

*en.wikipedia.org/wiki/Socratic_**method***

Asking and Answering Questions | Office of Faculty and ...

*fod.msu.edu/oir/asking-and-**answering-questions***

Topic 05: Classroom Assessment Techniques

1. **Aim:** To teach about Classroom Assessment Techniques so that University teachers will realize their value in providing immediate feedback to students and also in obtaining quick feedback regarding their teaching, so that both learning and teaching is improved.

2. **Learning Outcomes:** Participants would be able to
   - Define the term 'Classroom Assessment Techniques' (CAT)
   - Appreciate the importance of quick feedback through formative assessment.
   - Briefly explain at least 5 CATs
   - Determine the applicability of certain CATs for their classes

3. **Duration**: 75 Minutes

4. **Teaching / Learning Resources:** Hand out, white board

5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
5.1	Ask at what time it is important for a learner driver to get feedback (i.e. end of each session, end of full learning period, after going for the driving test). The fact that feedback needs to be given continuously even when driving will be / should be brought out. Using the above indicate the importance of informal and formative evaluation.	Q & A VE		5 5

5.2	Ask whether it is adequate for a student to get feedback only after the end-term results are out. Or even whether just the mid-term marks are adequate. Bring out the need for more continuous feedback. Ask whether it is important for the lecturer to get feedback whilst teaching. Ask how this could be done. Utilizing the responses to the above question, bring out the need for a mechanism of informal evaluation and feedback during the classroom teaching session too. Define and explain Classroom Assessment Techniques.	Q & A VE		7
	Advantages of CATs - Provide feedback on learning at time of it happening - Provide feedback on teaching at time of it happening - Helps students to develop their self-assessment skills - Amount of effort less than traditional assessment	BS	WB	5
5.3	Ask the trainees of possible techniques that could be used in the classroom.	BS	WB	5
5.4	Explain the following: (Give a handout with the description so that the trainees need not spend time writing it down) Minute Paper	VE	HO	25

	Muddiest Point Background Knowledge Probes Problem Recognition Tasks Documented Problem Solutions Directed Paraphrasing Applications Cards Student-Generated Test Questions Classroom Opinion Polls Group-Work Evaluations			
5.5	Ask which of the CATs could be used. Discuss whether it might be useful.	SR TS		10
5.6	Ask them to write to one CAT they can use, and as to how it could be used.	TA		4
5.7	Direct trainees to the reading for suggestions on how to use CATs.	TRdL		
5.8	Summary - Bring out the importance of CATs for quick feedback, and thus formative assessment - Bring different CAT's that could be used in class	TSm		5

6. **Assessment:** Use of Classroom Assessment Techniques during the micro-teaching session.
7. **Essential Reading:**

http://sloat.essex.edu/sloat/delete/contentforthewebsite/classroom_asseSsment_techniques.pdf,
http://www.flaguide.org/cat/cat.php

8. **Supplementary Reading**

http://www.schreyerinstitute.psu.edu/pdf/classroom_asseSsment_techniques_intro.pdf

Supplementary Readings

These readings are from the sources indicated. Minor modifications and reorganization of the material has been done in some cases.
For content: http://cft.vanderbilt.edu/teaching-guides/assessment/cats/

Classroom Assessment Techniques (CATs) are generally simple, non-graded, anonymous, in-class activities designed to give you and your students useful feedback on the teaching-learning process as it is happening.

Why Should I Use CATs?

CATs can be used to improve the teaching and learning that occurs in a class. More frequent use of CATs can…

- Provide just-in-time feedback about the teaching-learning process
- Provide information about student learning with less work than traditional assignments (tests, papers, etc.)
- Encourage the view that teaching is an ongoing process of inquiry, experimentation, and reflection
- Help students become better monitors of their own learning
- Help students feel less anonymous, even in large courses
- Provide concrete evidence that the instructor cares about learning

http://www.cmu.edu/teaching/asseSsment/howto/assesslearning/CATs.html

Minute Paper

Pose 1-2 questions in which students identify the most significant things they have learned from a given lecture, discussion or assignment. The question can be very general or content specific and their answers help you to determine if they are successfully identifying what you view as most important. Give students about 1-2 minutes and ask them to write a response on an index card, or no longer than a half page.

Muddiest Point

Similar to the Minute Paper, ask your students to answer: "What was the muddiest point (i.e. the point that was least clear, or not clear at all) in today's lecture, or the reading?" Students need to identify fairly quickly what they do not understand and articulate it.

Background Knowledge Probes

Create a short questionnaire to determine how much and what kind of relevant background knowledge students bring to your course. Your goal might be identifying what is familiar to them or determining their level of recall from prior related courses. Be sure to make the questionnaire anonymous and be clear that it is not a quiz and will not be graded.

Problem Recognition Tasks

Identify a set of problems that can clearly be solved better by one of a few methods that you are teaching in the class. Ask students to identify by name which methods best fit which problems without actually solving the problems. This task works best when only one method can be used for each of the problems.

Documented Problem Solutions

Choose 1-3 problems and ask students to write down all of the steps they take in solving them with an explanation of each step. Consider using this method as an assessment of problem solving skills at the beginning of the course or as a regular part of the assigned homework.

Directed Paraphrasing

Select an important theory, concept or argument that students have studied in some depth and identify a real audience to whom your students should be able to explain this material in their own words (e.g. a grants review board, a city council member, a vice president making a related decision). Provide guidelines about the length and purpose of the paraphrased explanation.

Applications Cards

Identify a concept or principle your students are studying and ask students to come up with 1-3 applications of the principle from everyday experience, current news events, or their knowledge of particular organizations or systems discussed in the course.

Student-Generated Test Questions

A week or two prior to an exam, begin to write general guidelines about the kinds of questions you plan to ask on the exam. Share those guidelines with your students and ask them to write and answer 1-2 questions like those they expect to see on the exam.

Classroom Opinion Polls

When you believe that your students may have pre-existing opinions about course-related issues, construct a very short 2-4 item questionnaire to help uncover students' opinions.

Group-Work Evaluations

Decide what you want to know about the group work, such as how well the group members worked together, how many actively participated most of the time, how many were well prepared for the group's activity, or what the group could do to improve its effectiveness. Distribute a short 4-5 question evaluation form and be clear about the purpose (e.g. to improve group interactions and performance).

http://cft.vanderbilt.edu/teaching-guides/asseSsment/cats/

How to Use CATs?

Results from CATs can guide teachers in fine-tuning their teaching strategies to better meet student needs. A good strategy for using CATs is the following.

1. Decide what you want to assess about your students' learning from a CAT.
2. Choose a CAT that provides this feedback, is consistent with your teaching style, and can be implemented easily in your class.
3. Explain the purpose of the activity to students, and then conduct it.
4. After class, review the results, determine what they tell you about your students' learning, and decide what changes to make, if any.
5. Let your students know what you learned from the CAT and how you will use this information.

Lesson Planning and Instructional Teaching Methods for Undergraduate Teaching

1	Module Title	Module 4: Facilitated and Independent Teaching and Learning
2	**Module Duration**	6 hrs and 15 min (375 min) + 40 min/trainee micro teaching
3	**Prerequisites and Co-requisites**	Engage in teaching (e.g. conduct lessons in theory and practical) for undergraduate study programs. Followed Module 1 of the manual.
4	**Module Aims**	To teach the principles and practice of facilitated, guided and independent teaching and learning, so that participants will be able to use them in planning lessons effectively for effective independent and lifelong learning of students.
5	**Objectives and Learning Outcomes**	• To identify teaching and learning methods for facilitated and independent learning • Design lessons and courses with such teaching and learning methods • Analyze the advantages and disadvantages of such teaching and learning methods • Learn the role of a facilitator • Teach the role of an independent learner • Plan lessons, courses and study programs for effective and efficient delivery
6	**Assessment Strategy**	One or a mix of Assignments and/or Portfolio
7	**Syllabus**	• Assignments • Tutorials • Problem-based Learning • In-plant/Industrial Training • Micro Teaching • Action Plans for Future

Topic 01: Assignments

1. **Aim:** To teach the significance of using Assignments as an instructional teaching method in higher education so that teachers would be able to use it effectively in scenarios/situations where it is most appropriate.

2. **Learning Outcomes:** Participants would be able to

   - Define an "assignment" in higher education
   - Write aims and ILOs for an assignment
   - Determine factors that should be considered when planning an assignment.
   - Determine situations for individual assignments, their advantages and disadvantages
   - Determine situations for group assignments, their advantages and disadvantages

3. **Duration:**75 minutes

4. **Teaching/Learning Resources:**
   - Curriculum of study program
   - Details of course/s taught by participants
   - Bloom's Taxonomy

5. **Lesson Content and Methods:**

No.	Content Outline	Teaching and Learning Method	Time (min)
1.1	What is an assignment? • An ASSIGNMENT is a task given to a student/s to be accomplished individually or by a group	Brainstorming Q & A	10
1.2	What is the AIM of assignments? • To teach and provide the knowledge, skills, attitudes and opportunity to complete a given task successfully so that the students will develop an inquiring mind, self confidence,	Individual activity Discussion	15

	team work ability and leadership potential.		
1.3	What factors should be considered in PLANNING an assignment • What abilities should the assignment develop? • Can they be achieved by any other means? Or is this the best method? • What are the current abilities of the student? • Activities required for the assignment • Group or individual assignments • Areas of study • Resources required • Time allocation • Presentation of the assignment • Assessment procedure	Brainstorming Q & A Collection of ideas	15
1.4	Individual Assignments Advantages : • Greater individual responsibility, develops self reliance and independence • Individual attention is possible • Allows students to learn according to abilities and encourages creativity • Easy to assign responsibilities • Possible to assess individual students Disadvantages : • Lacks group work, interaction and exchange of ideas • No opportunity to learn from others • Requires a lot of resources for large classes • Causes problems of supervision of a large number	Individual activity	10
1.5	Group Assignments Advantages : • Develops confidence and responsibility • Allows group work and trains students in group co-operation and interaction of ideas • Permits sharing of resources • Facilitates supervision • Reduces time constraints	Group activity	20

	• Stimulates motivation Disadvantages : • Does not develop skills of weaker students • Difficult to assess • Laziness is not discovered • Requires leadership • Interests of individual students not catered for • Less individual accountability • May develop conflicts		
1.6	Summary The situations when assignments can be used most effectively	Discussion	5

5. Assessments: Write 2 assignments – one individual and one group for any of your courses and explain why you chose" assignments" to achieve your intended learning outcome/s.

6. Suggested Reading:

Teaching strategies
serc.carleton.edu › ... › Table of contents › Part 2 index
[PDF]

TEACHING METHODS AND ASSIGNMENTS FOR ACHIEVING ...
*gpgrieve.org/linden/**Teach**.pdf*
[PDF]

Assignment method - Teacher Education for You
*jtmadhavan.files.wordpress.com/2009/11/**assignment-method**.pdf*

News for assignments as a teaching method
WEB EX: New **teaching method** 'flips' classroom learning
KLTV - 11 hours ago

Topic 02: Tutorials

1. **Aim:** To teach about tutorials so that the University teachers could use them more effectively with students to enable more active learning through independent activities and interaction with tutors.
2. **Learning Outcomes:** Participants would be able to
   - Recognize the importance of tutorials in independent and supported learning of student at a deeper level
   - Briefly describe different types of tutorials
   - Propose a topic/s in his/her area of teaching
   - Conduct a tutorial
3. **Duration**: 75 Minutes
4. **Teaching / Learning Resources:** Dimi paper, marker pens, lap-top computer, multi-media projector
5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
2.1	Explain that a tutorial is a major method of teaching used in Oxford University over a long period of time. Ask whether a leading University like this would have continued its use if it was not effective. Relate to the use of tutorials in our Universities, specially certain Faculties, and hence the need to learn about this method.	VE Q & A VE		8
2.2	What do you think is a 'tutorial'? A tutorial is a small class of one, or only a few, students, in which the tutor (a lecturer or other academic staff member) gives individual attention to the students.	Q & A VE		5

2.3	Break up into groups (of around 8). Ask them to discuss the following: - The objectives of a tutorial. - The types of ways in which a tutorial can be done. - Examples of questions/topics that could be covered effectively through a tutorial - The important factors to consider in conducting a tutorial.	GpDn		15
2.4	Get each group to present (on a poster) only one aspect. The particular aspect to be given/ randomly chosen only after the group discussion to ensure that each group discusses all the points. Other groups to add relevant points. Could be written on the poster. The trainer too should add any missing points.	GpPrsn	Paper & Pens	15
2.5	Objectives of a tutorial – Expand on what the groups have presented to ensure all are covered - Promote active learning – interaction with peers and staff - Opportunity for independent work - Understanding of material at a deeper level - Enables analysis of situations and synthesis of possible strategies - Enables questioning and communication of opinions - Enables students to obtain quick feedback - Helps in learning how to learn	VE	MM	5
2.6	Types of tutorials Expand on what the groups have presented to ensure all are covered.	Q & A	MM	8

	- Writing of essays in answer to questions given which could be based on areas such as the topic covered, and current problems and issues - Problems as in mathematics - Data analysis - Book reviews - Reading and analyzing journal articles			
2.7	Conducting a tutorial. Expand on what the groups have presented to ensure all are covered. - Clear instructions - Support from the tutor, especially for those not familiar with tutorials, at the start - Schedule of due dates - Feedback on time - Supportive feedback with specific comments for improvement	VE	MM	5
2.8	Ask trainees to think of possibilities of using the tutorial method (if not already using). For those using, whether it could be improved or whether a new type of tutorial would be useful. Ask some who are not already using this as method to share what the possibilities might be.	IN TS		5
2.9	Summary-State the main points	VE		5

6. Assessment: A plan for a tutorial

7. Essential Reading

http://www.learning.ox.ac.uk/support/teaching/resources/teaching/

8. Supplementary Reading

http://www.tlu.fbe.unimelb.edu.au/tutortraining/begin.html

Topic 03: Problem Based Learning

1. **Aim:** To teach what Problem Based Learning (PBL) is so that teacher will realize its value in developing abilities in students to be better prepared for the real working world and for life-long learning.

2. **Learning Outcomes:** Participants would be able to
   - Explain what a PBL is
   - Explain the advantages of PBL
   - Recognize the importance of PBL in developing skills needed for the world of work and for life-long learning
   - List the steps to be followed in conducting a PBL
   - List the role of the lecturer/tutor in a PBL exercise

3. **Duration**: 75 Minutes

4. **Teaching / Learning Resources:** Problem, lap-top computers (if problem given is used, trainees could be asked to bring their lap-top computers), white board, lap-top computer, multi-media projector

5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
3.1	An appropriate problem should be given to the trainees in a previous session so that they could come prepared for this session. A suggested problem is as follows: Many poor people find it difficult to obtain the nutrition required due to their low income. Suggest a suitable meal plan for a day for a family of five. The family comprises the father (40 yrs.), mother (37 yrs), two sons (13 and 8 years), and a daughter (10 yrs.). They	Gp As	Prob-lem	

	can allocate only Rs.300 per day (or appropriate value for present time) for the food ingredients (you may disregard the cost of fuel). Group the trainees to groups of around 8 each. On the day the problem is given ask them to appoint a leader, discuss the problem briefly, and to assign different tasks to different people so that they could come ready for the discussion. For example, 2 to be in charge of finding the nutrient requirements, 2 find out the cost of food items, to have an Spreadsheet (Excel) ready to facilitate the computations.			
3.2	On the day of the session proper ask them to work in a group to quickly come up with a solution.	GpDn	Lap-tops	20
3.3	Explain what is PBL Learning which takes place when an unfamiliar problem, situation or task is presented to the students and the students are required to determine for themselves how they will go about solving the problem. This usually occurs through working in small groups. It allows the students to utilize their prior knowledge in the topic area, identify the gaps in their knowledge as they attempt to solve the problem, find and share additional material needed, generate alternatives and collectively determine the best course of action. Relate this to the exercise they just completed.	VE		10
3.4	Bring out the advantages of PBL PBL supports the achieving of the following: - Different learning environment which is better	BS	WB	8

	for some objectives - Deeper learning - Easier recall in work settings - Learn problem solving skills - Learn team working skills - Learn lifelong learning skills - Develops self confidence			
3.5	Bring out the difficulties of PBL - Needs high resources including tutors to handle the groups - Staff needs to be very well prepared - Content coverage would be less	Q & A		5
3.6	Briefly explain the PBL process and give the relevant readings 1. Identify the problem 2. Explore pre-existing knowledge 3. Generate hypotheses 4. Identify learning issues 5. Self study 6. Reevaluation and application of new knowledge to problem 7. Assessment and reflection on learning	Q&A	WB	10
3.7	Roles of the Lecturer/tutor - Planning the PBL - Climate setting - Clarifying learning requirements (i.e. of the student from this exercise) - Helping students as they determine the learning activities - Guidance of the students in their learning activities - Evaluating learning outcomes	VE	MM	10

3.8	Summary Trainees to indicate - Topics that could be covered through PBL - How they would do it - Objectives that could be achieved - Difficulties they would face	TSm		5

6. Assessments: Brief outline(less than a page) of one possible use of PBL in class. To include the problem, how it would be conducted and learning objectives to be achieved.

7. Essential Reading:

http://www.fhs.mcmaster.ca/facdev/documents/tutorPBL.pdf

8. Supplementary Reading:

http://www.ubc.ca/okanagan/ctl/__shared/assets/PBL_Book_by_Donald_R1418.pdf

Topic 04: In-Plant/Industrial training

1. **Aim:** To teach the significance of using in-plant/industrial training as an instructional teaching method in higher education so that teachers would be able to use it effectively in scenarios/situations where it is most appropriate.

2. **Learning Outcomes:** Participants would be able to

    - Define in-plant/industrial training
    - Write aims and ILOs for in-plant/industrial training
    - Co-ordinate an in-plant training program
    - Sensitize students regarding in-plant training
    - Formulate and implement an assessment strategy for the in-plant training

3. **Duration:** 75 minutes

4. **Teaching/ Learning Resources:**

    - Curriculum of study program
    - Details of course/s taught by participants
    - Bloom's Taxonomy

5. **Lesson Content and Methods:**

No.	Content Outline	Teaching and Learning Method	Time (min)
4.1	What is in-plant/industrial training It is a period of training at an actual work place (where the student would/could find employment later) during the study program which he/she is undergoing	Q & A	10
4.2	Aim: To provide an exposure to the working world for the student so that he/she would be better prepared to fit-in upon graduation. ILOs – at the end of the in-plant/industrial training trainee/student would be able to • display the attributes, skills, behavior and attitude required at the work place • demonstrate the ability to establish effective working relationships with others, defining,	Discussion Group activity	05 20

	sharing and delegating responsibilities • select and apply appropriate scientific and business principles and techniques to diagnose problems/issues • demonstrate integrated and holistic analysis of the issues of concern and propose alternatives. • collect, organize and critically evaluate information from a range of sources • communicate findings and conclusions/recommendations appropriately, effectively and efficiently • display skills of professional scholarship required for personal development and career management		
4.3	Preparation: If anin-plant training is to be included in to a study program curriculum there is considerable pre preparation necessary for it to be effective and to bring about the desired outcomes. This would involve a. contacting suitable organizations that could provide in-plant training opportunities b. visiting such places and make sure that a conducive environment would be available for students/trainees c. clarify the outcomes expected from the organization as well as the study programs expectations d. make formal arrangements for supervision of work and how work should be reported by student and organization e. determine the assessment strategy for such a training	Individual activity Discussion	10
4.4	Orientation of students/trainees for in-plant training Prior to the student's visit to the organization he/she should be sensitized about the following - the work scenario of the organization - the expected outcomes of the training - code of conduct, dress code and work ethics -reporting obligations and supervision hierarchy - assessment strategy for the training - maintenance of a log book/diary etc	Case Study Role Play Group activity	20
4.5	Design a log book/portfolio	Individual activity	10

	• Why is it necessary? • What should be included? • What should be completed by trainee? • To whom it should be submitted? • How to assess a log book/portfolio?		

5. Assessments: Organize an in-plant training program for your department and design a log book that could be given to the students to take and write their reflections about their learning and also reporting for the training

6. Suggested Reading:

Training Within Industry - Wikipedia, the free encyclopedia

en.wikipedia.org/wiki/Training_Within_Industry

[PDF]

Education and Training

jpt.mohe.gov.my/DASAR/RMK2-%20BAB%2014-%20BI.pdf

File Format: PDF/Adobe Acrobat - Quick View

Education - Wikipedia, the free encyclopedia

*en.wikipedia.org/wiki/**Education***

Topic 05: Micro Teaching

1. **Aim:** To afford an opportunity to trainees to deliver a lesson to "fellow trainees" so that they are confident they could plan and deliver lessons effectively and efficiently

2. **Learning Outcomes:** Participants would be able to

- Produce a lesson plan for a lesson of their choice
- Incorporate the most suitable teaching/learning methods in the lesson plan
- Deliver the lesson to a group of peer participants effectively and efficiently
- Obtain feedback on the lesson from trainers and peers
- Reflect on their teaching/learning scenario and provide feedback to trainers and peers

3. **Duration:** 40 minutes/trainee

4. **Teaching/ Learning Resources:**
   - Lesson plan
   - Required equipment – multimedia, whiteboard, laptop etc.

5. **Lesson Content and Methods:**

No.	Content Outline	Teaching and Learning Method	Time (min)
5.1	Trainee (teacher) would define the target group and topic	VE	5
5.2	Deliver the lesson to the target group Reflect on self's teaching and provide feedback Obtain feedback from trainers and peers	Appropriate teaching/learning methods Reflection Discussion	30
5.3	Trainers' Commentary sheet	VE	
5.4	Trainers' feedback	Ve	5

6. **Assessments:** A lesson plan for the same lesson incorporating comments and suggestions for improvement.

Topic 06: Action Plans for Future

1. **Aim:** To guide the trainees in order for them to make realistic plans for the short and medium term to improve their teaching.

2. **Learning Outcomes:** Participants would be able to
    - Recognize the importance of concrete plans for developing their teaching
    - Identify, prioritize and determine goals for the future
    - Determine (a) strategy/ies for achieving their goals
    - Choose goals to be achieved in the short term and medium term
    - Choose, if they so desire, a person to whom they will be 'voluntarily accountable'

3. **Duration**:75 Minutes

4. **Teaching / Learning Resources:** White board, photocopier in close vicinity

5. **Lesson Content and Methods:**

No.	Content Outline	T & L Md.	TLR	Time (min)
6.1	Ask whether the trainees learnt anything useful during the training session. Ask whether they would like to practice at least some of the things they learnt during the training. Ask those who like to do so to raise their hands. Ask them to name a few of those which were useful. (Get only a few responses just to initiate their process of thinking. Do not get many as it could affect the individual identification of what was important for each one individually)	Q & A	WB	5

6.2	Ask the trainees to individually think deeply, and list on paper, those aspects which they feel would be helpful to improve their teaching.	SR TA		15
6.3	Request some of the trainees to share some of the thoughts they listed. (This would lead to generation of additional thoughts in the other trainees)	TS	WB	8
6.4	Ask the trainees to think whether they could add some more ideas to their list.	Q & A		5
6.5	From the list generated, ask the trainees to select **three** things he/she would like to do for **each** of the following periods; i) The next three months ii) During the course of the next year In choosing, ask them to consider the importance (in terms of improving teaching), their preference, resources needed and probability of achieving. Ask them to modify if needed (e.g. writing lesson plans for only a selected segment, rather than for all the classes).	TA VE		7
6.6	For each of the selected items, ask the trainees to determine how it could be done, and to write it down. Also to consider some difficulties that may arise, and as to how those could be overcome.	TA		10
6.7	Impress upon the trainees the importance of really working towards achieving the set goals. Ask how many would really like to do these. Request them to once again to raise their hands if they would really like to do what they had written down. Indicate that there is a probability of not working	VE Q & A TA VE		10

	towards their goals, especially when there could be other pressing needs too. Explain the importance of being accountable to someone to increase the probability of achieving their goals. Ask them whether they think being 'voluntarily accountable' would be helpful. For those who agree on this, ask them to write on the reverse of the paper the person (probably a friendly colleague) with whom they will share these goals, so that that person could encourage, gently remind, and push (if needed!) to accomplish the goals.	Q & A TA		
6.8	Conclusion: - Restate that it is now up to them to improve their teaching - Indicate that all big journeys start with small steps - Restate the importance of obtaining the support of a friendly colleague. Even asking him/her to sit in on a class periodically to give some constructive feedback.	VE		7

6. Assessment:

Goals and strategies written during the session

Since it is important for the trainees to take back what they wrote, arrangements should be made to photocopy these. The reverse side with the name of another person should not be copied. The original should be returned to the trainees on the same day as this session will be on the last day of the training program.