

Classroom Testing and Evaluation (EDU404)

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CLASSROOM TESTING AND EVALUATION (EDU 404)

LECTURE 01

Introduction to classroom assessment and basic terms

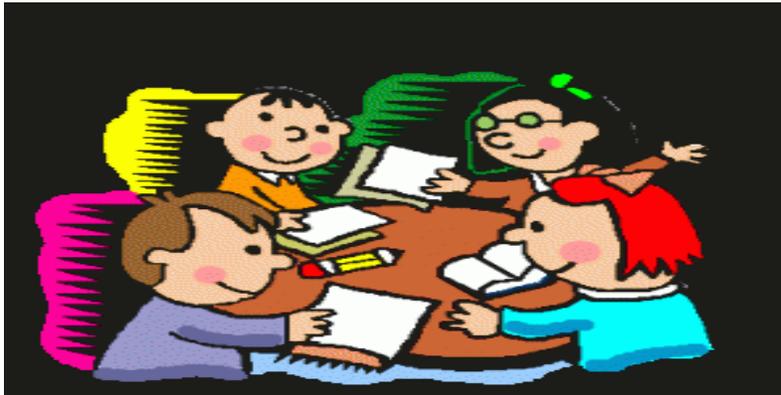
Topic 1: What is Classroom Assessment?

Definition-1:

Assessment is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development. (Palomba & Banta, 1999)

Definition-2:

Assessment is the **process of gathering** and discussing information from **multiple** and **diverse sources** in order to develop an understanding of what students know and understand; the process culminates when assessment results are used to **improve** subsequent learning. (Huba & Freed, 2000)



In short, the main points in these definitions are:

- Process of gathering information
- Multiple sources
- Develop and understand

- Improvement

Topic 2: Emerging Points from These Definitions:

1. Assessment is a systematic process: certain circumstances, goals and planning must be kept in mind while assessment. Nothing can take place haphazardly. See the image below:



1. Information is gathered from different sources:

There are many sources to get information about the students like homework, exam papers, class test, projects etc.

2. Judgment:

We gather all the information for judgment about what has yet achieved and what is still missing. Making such judgments is the essential part of process of improvement.

3. About a process or product:

Now this judgment is made for the assessment about a process or product. All the classroom activities and learning are a process and the knowledge gained by the students and a competent student is the product.

4. Improvement:

These judgments are made for improvement in the process and the product. Assessment is just like a bridge that is connecting behind as well as the future of the students.

Topic 3: Classroom Assessment: Classroom Context:

1. Information is gathered systematically: It is a systematic process, for example; a teacher teaches in a classroom and then at the end gives an assignment to the students as quiz, midterm exam and final term exam. Final term exam is never taken at the start of the academic session. So, a sequence is followed that is systematic.

2. From different sources to make improvements in teaching and learning: Assessment of students is done through a variety of ways like questioning in classroom, assignments, quizzes, exams etc. The information gathered from all the sources make your assessment.

3. To make improvements in teaching and learning: The results of assessment always open grounds of improvement.

4. To make changes in syllabi, curriculum or policies: All the results of assessment can be reviewed critically to make changes in the system for improving the teaching and learning process at policy making level.



Topic 4: Measurement

Measurement: refers to dimensions/quantity/weight. Measurement is normally shown by using numbers. For example, measuring a box, or weighing it. Measurement is always with reference to some scale.

Topic 5: Testing

Testing: refers to the process of judging some ability or deciding about some ability. For example, testing your ability for driving or in classroom; testing IQ.

**Topic 6: Assessment**

Assessment: is a broader term and including measurement and testing also; it is usually with reference to some goals. For example, your assessments; like you have to learn hundred words by this weekend. So, your assessment will be related to those 100 words that how much and how firmly you have learnt them. Assessment is also related to organizations. All organizations assess their employees such as audit teams and inspection teams visits the organization.

Topic 7: Evaluation

Evaluation: is a complex process and broader term including measurement, testing and assessment. All these things give you the value of the product/process that you are going to access. Evaluation also provides us with the ground for improvement.

Topic 8: Modification or Improvements:

The basic purpose of every assessment is to make changes. There is no use of assessments if improvements are not made. The teacher develops a lesson plan to be followed in classroom; the lesson plan is then implemented in classroom. At the end there is evaluation of it. The purpose to evaluate it is modification/improvement.

Lecture 02**TYPES OF ASSESSMENT****Topic 9: Types of Assessment:**

There are different types of assessment; for example,

- You have midterm exams
- You have final term exams
- House exams and board exams
- Your classroom as a process
- Your result as a product

Names of these assessments are:

- Formative
- Summative
- External and internal
- Product
- Process

Topic105: Formative Assessment

Formative is a type of testing in which a range of formal and informal assessment procedures employed by teachers during the learning process in order to modify teaching and learning activities to improve student attainment.

Key points use for formative assessment:

- Range of formal and informal assessment
- During the learning process
- To modify teaching and learning
- To improve

Topic 11: Summative Assessment

Summative assessment refers to the assessment of participants, and summarizes their development at the particular time. In contrast to formative assessment, the focus is on the outcome of the program.

Key points use for summative assessment:

- Assessment of participants
- Development at a particular time
- The outcome of a program

Topic 12: External and Internal Assessment

Internal assessment is the process by which an organization assesses its policies and systems internally. It is carried out by the departments within the organization and employees themselves are skilled at managing internal assessment.

External assessment on the other hand involves an external organization or a consultancy firm to judge and monitor the organizational procedures and give an unbiased opinion for betterment.

Focus is on internal system vs external agencies. For instance, your house exam and board exam.

Topic 13: Process Assessment

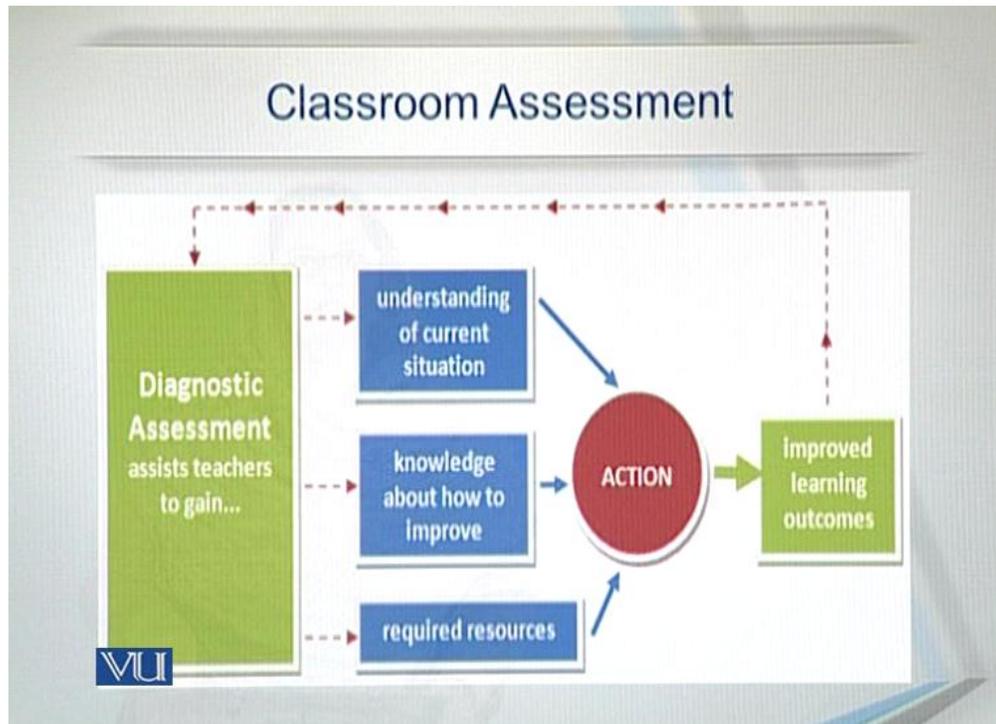
Process assessment means the assessment of process taking place including the factors involved in it. 'During any process' is the key word. For example, classroom proceedings.

Topic 14: Product Assessment

Product assessment means the assessment of product at the end of some process. Achievement at the end with reference to some goal is important here. For instance, your final grades.

Topic 15: Diagnostic Assessment

- Diagnostic assessment helps to diagnose weak areas of learners. It has normally been studied with reference to language learning.



- Diagnostic assessment looks for problem areas for a student during the learning process. It has been helpful especially in language and mathematical field.

Topic 16: Norm Referenced Assessment

- A norm referenced assessment makes judgments about people, on the basis of sources and distributions of scores. For instance, the top 10 percent of the class are awarded first class and the next 15 percent are awarded second class.
- A norm referenced assessment has been the most common type of assessment used in education.
- Though norm referenced assessment is very common, but does not give accurate and exact assessment. For example, a student who fails in one year may well have passed in others. Similarly getting higher grades does not mean higher capabilities.

Topic 17: Criterion Referenced Assessment

- Criterion referenced assessment makes judgments about performance, rather scores. It assesses the extent to which a student has received the performance outcomes of a subject.
- For example, oral presentations may be judged on the following criteria: knowledge of subject material, ability of responding to the questions, structure of presentation, use of audio/visual aids, pace and timing and delivery style.

Topic 18: Norm vs Criterion Referenced Assessment

- Norm referenced is more common and has been in practice for years where as criterion referenced is new and less practiced as compared to norm referenced.
- Norm referenced focuses more on scores where as criterion referenced targets the performance of students. Criterion is closer to real life situation as compared to norm referenced.

LECTURE 03**RELIABILITY****Topic 19: Reliability and Related Concepts**

Reliability refers to the extent to which assessment results are consistent. The assessment that maintains the consistency in results is known as reliable.

“Reliability is the extent to which a measurement instrument or procedure yields the same results as on repeated trails (Carmines and Zeller, 1979)”

For example, a calculator cannot be reliable if it gives wrong calculations or results. The weight of an object is not reliable if machine is not working properly. Same is the case of the results obtained from assessments.

What is meant by the term of unreliable results? The unreliable results of assessment mean inconsistency. Keeping these views in mind, we can trust the results if these are consistent. It is the evidence of an accurate system of assessment. Keeping in view the significance of reliability, different methods are used to attain reliability. For example, test-retest procedure, the alternative–test form procedure and the split halves procedure.

Topic 20: Test-retest Procedure

Same test, given two (or more) times. Example: One might develop a test and will be administered twice with the same students. If the subject provides very small answers both times, it means results will be similar. Then one can assume that the assessment results are reliable.

Advantages of using ‘Test-Retest Procedure’:

- This procedure has strong logical appeal, one is measuring more than once with the identical test.
- One avoids the problem of developing more than one test.

Disadvantages of using ‘Test-Retest Procedure’:

- Events taking place

- Persons might change
- Students become more practiced second time.

Topic 21: Alternative-test Form Procedure

Create two forms of the same test (vary the items slightly). Reliability is stated as correlation between scores of Test1 and test 2. If students give similar answers, it means the results will be the same and it will have reliability.

Advantages:

- As tests differ though slightly, students cannot apply their guess work

Disadvantages:

- One has to develop two tests.

Topic 22: Split Halves Procedure

- Same test, administer once, grade each half separately, compare grades from each half.

Advantages

- Need to develop just one test.
- No maturation
- No cueing

Disadvantages

- What is the criterion of splitting halves?

Topic 23: Internal Consistency Procedure

- Same test, administered once, score is based upon average similarity of responses to the items. It is a measure of reliability used to evaluate the degree to which different test items that probe the same construct produce similar results.

Advantages

- Need to develop just one test.
- No maturation.
- No cueing.

Disadvantages

- Scholars do not agree on the formula applied to calculate internal consistency.

Topic 24: Coefficients Range

- The value of reliability coefficients range from 0 to 1.0.
- A coefficient of 0 means no reliability.
- 1.0 means perfect reliability but hard to claim.
- If it is above .80, it is said to have good reliability; if it is below .50, it would not be considered a very reliable test.

LECTURE 04**VALIDITY****Topic 25: Validity and Related Concepts**

- Validity means how well a test measures what it is supposed to measure.
- A vocabulary test can not be valid if it measures your grammar ability. Similarly, a comprehension test can not be valid if it measures vocabulary.
- What is meant by the term of 'invalid test'? it means a test fails to measure what it is supposed to measure.
- We can trust the results if these have been attained from a valid test. It is the evidence of an accurate system of assessment.
- There are different types of validity like face validity, content validity, construct validity, criterion validity and predictive validity.

Topic 26: Face Validity

- Does the test appear to test what it is supposed to be tested?
- A drawing test must be related to figures, so the question paper should appear with figures. A test that asks for filling some blanks must have blanks on paper. A multiple choice question must have options along with it.

Topic 27: Content Validity

- Content validity refers to the contents a test is suppose to measure.
- For instance, a book has ten chapters; these chapters are the contents of the book.
- The topics of your course of assessment are the content of this course:
{ A,B,C,D,E.F.G,H..... }
- Test: {B,C,F,H}

Topic 28: Construct Validity

- Construct validity refers to the construction of a test.
- You have the contents; how do you make a test? How do you tackle the questions? The contents of the course should be aptly covered in the question paper.

- For instance:
Contents: {A,B,C,D,E,F,G,H}
Test questions: a1, a2, a3. e1, e2, e3.
Test questions: b1, d1, f1,h1,a1.

Topic 29: Criterion and Predictive Validity

- How much a test can measure some performance with reference to some defined standards? It is known as criterion related validity.
- For instance, one is expected to be able to speak fluently after completing a course. So the test is valid if it can measure spoken ability.
- How much a test can predict future performance with reference to some defined standard? It is known as predictive validity.

Topic 30: Link between Reliability and Validity

Reliability and validity are related concepts. A test can not be reliable if not valid.

LECTURE 05**BIASNESS****Topic 31: Free from Bias****What is Bias?**

- Inclination for or prejudice against one person or group, especially in a way that is considered to be unfair; systematic unfair treatment of a particular group of individuals.
- There are different types of it:
 - Unfairness
 - Offensiveness etc.

Topic 32: Unfairness

- When some one's right denied due to like or dislike. In assessment, normally it is associated with teachers.
- It creates a mistrust among the stakeholders of assessment and hence affects the whole process. Unfairness questions the standards of assessment.

Topic 33: Offensiveness

- Using such language in question or such attitude that may offend some one. For instance the conflict between the white and the black in America during the civil war.
- Offensiveness not only deforms the image of the teacher, but also proves that assessment system is not reliable.

Topic 34: Assessment and Physically Challenged People

- Those who have some physical disability, must be facilitated in a balanced way.

Topic 35: Equality and Equity

- Giving equal opportunities to all is an important step to avoid biasness. Equality in time, in opportunities and equal standards for all in grading help to reduce biasness.
- Giving equal opportunities to all creates a harmony that leads towards equity.

Topic 36: Measures to Eliminate Bias

- Striving for diversity in test-development staffing and training test developers and scorers to be aware of the potential for cultural, linguistic and socioeconomic bias.
- Having test material reviewed by experts and trained.
- Screening for and eliminating items, references and terms that are more likely to be offensive to certain groups.
- Using multiple assessment measures to determine academic achievement and progress.

LECTURE 06**TOOLS OF ASSESSMENT****Topic 37: Tools of Assessment**

An assessment tool is a method of collecting information about a learner's performance and understanding about a certain topic. There are different types of these tools like observation, questionnaires, interviews, tests, projects etc.

Topic 38: Observation

Classroom observation is a process by which a teacher observes one or more class sessions, records the practices and student actions.

Topic 39: Interview

A formal face to face meeting normally designed with the purpose of assessment.

Topic 40: Projects

- An individual or collaborative enterprise that is carefully planned to achieve a particular aim and with the purpose of assessment.

Topic 41: Diaries and Portfolios

- A daily record, usually private, especially of the writer's own experience, observations, feelings, attitudes etc. here with the purpose of assessment.
- Portfolio assessment is an assessment form that learners do together with their teachers and is an alternative to the classic classroom test. The portfolio contains samples of the learner's work and shows growth over time.

Topic 42: Tests

A series of questions, problems or physical responses designed to determine knowledge, intelligence or ability.

LECTURE 07**OBSERVATION****Topic 43: Observation**

Observation is the active acquisition of information from a primary source. In living beings, observation employs the senses. In science, observation can also involve the recording of data via the use of instruments. The term may also refer to any data collected during the scientific activity.

Topic 44: Overt and Covert Observation

- Observation can be overt when everyone knows that they are being observed.
- Observation can be covert when nobody knows that they are being observed.
- The benefit of covert observation is that people behave naturally if they do not know they are being observed.
- However overt observations are preferred due to ethical problems.

Topic 45: Participation of the Observer

Participating role: when the observer takes part in activity and observes it as well.

Non-participating role: when the observer does not take part in activity and only observe it.

Topic 46: Conducting Observation

- Observations of others offer many possibilities for learning. Through observations, it is possible to discover causes of behavior, to increase acceptance of individual variations in growth and development, and interact with others on a more meaningful level.
- There are several observation techniques, such as a running record, factual record time sampling, checklists, hypothetical statement supported by facts, and others

Topic 47: Merits of Observation

- Direct
- Independent
- Natural

Topic 48: Demerits of Observation

- Observer's bias.
- Effect of observer.
- Time consuming.
- Less understanding.

LECTURE 08**QUESTIONNAIRE****Topic 49: Questionnaire****What is a Questionnaire?**

A set of printed or written questions with a choice of answers, devised for the purpose of a survey or statistical study.

It serves four basic purposes:

1. Collect the appropriate data.
2. Make data comparable to analysis
3. Minimize bias in formulating and asking the question
4. Make questions engaging

Topic 50: Types of Questionnaire

Open ended: an opportunity to express the opinions in a free-flowing manner.

Closed format: respondents are restricted to choose among any of the given multiple choice answers.

Yes/No format: respondents are to choose positive or negative answers.

Topic 51: Some More Types of Questionnaires

Likert questions: how strongly respondents agree to a particular statement.

Bi polar questions: two extreme answers written at the opposite ends of a scale.

Leading questions: that lead to a particular type of answer.

Topic 52: Interpreting Questionnaire

Calculation like percentages and make inferences.

Topic 53: Merits of Questionnaire

- Practical
- Large amount of information
- Easy to manage
- Easy to analyze
- More reliable
- More valid
- Comparable

Topic 54: Demerits of Questionnaire

- Inadequate for certain information like thinking process, behavior.
- Questions are the reflection of the person who asks them.
- No way to tell how true the information is.
- No way to tell how thoughtful the respondent is. Respondents may understand differently.

LECTURE 09**INTERVIEW****Topic 55: Interview**

A formal face to face meeting normally designed with the purpose of assessment.

It serves the purpose to get some specific information and also some assessment about the interviewee.

**Topic 56: Structured and Semi Structured Interviews**

- A structured interview, or a standardized interview is a method used in the survey research. The aim of this approach is to confirm that each interview is offered with exactly the same questions in the same order.
- The structured ones emphasis the Reliability- how accurately different respondents answers can be compared.
- A semi structured is open, allowing new ideas to be brought up during the interview as a result of what the interviewee says.
- In depth interviews emphasis validity-How close answers get to the respondents' real views.

Topic 57: Transcribing an Interview

- Interview transcription is a word-to-word written documentation of a taped or live interview.

- Words like “OK” and “Good bye” have also been picked through apparently these do not carry any information.

Topic 58: Interpreting an Interview

We interpret the interview through the transcription.

Topic 59: Merits of Interview

- Practical
- Face to face
- Human side direct
- Body language
- Not influenced by others
- Higher response rate
- Participation from both sides

Topic 60: Demerits of Interview

- Time consuming (setting up, interviewing, transcribing, analyzing, feedback, reporting)
- Cost
- Inferences from transcription

LECTURE 10**PORTFOLIO AND PROJECTS****Topic 61: Portfolio****What is a Portfolio?**

- A portfolio is a purposeful collection of student's work that exhibits the student's efforts, progress and achievements in one or more areas of the curriculum.
- It helps to get some specific information and also record of the progress made by the students in specific area.

Topic 62: Project and Growth Portfolios

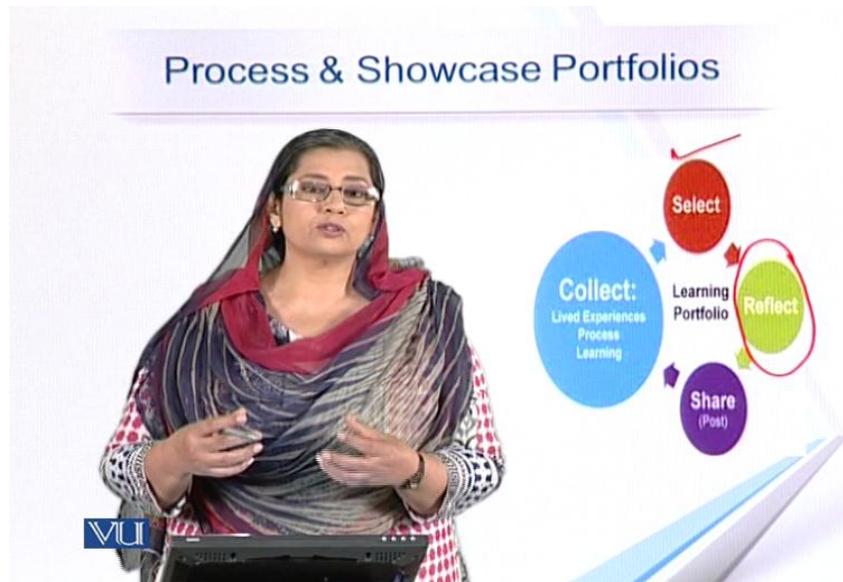
- Project portfolios organizes a series of projects into a single portfolio of reports that capture project objectives and other critical factors.
- Growth portfolio organizes a record of the progress made in some specific area. For instance, about reading certain books or covering a certain syllabus.
- Record from starting point to the final stage is maintained.

Topic 63: Achievement and Competence Portfolios

- Achievement portfolio maintains the record of one's achievement in certain area against specific targets.
- Whereas competence portfolio maintains the record of competition.

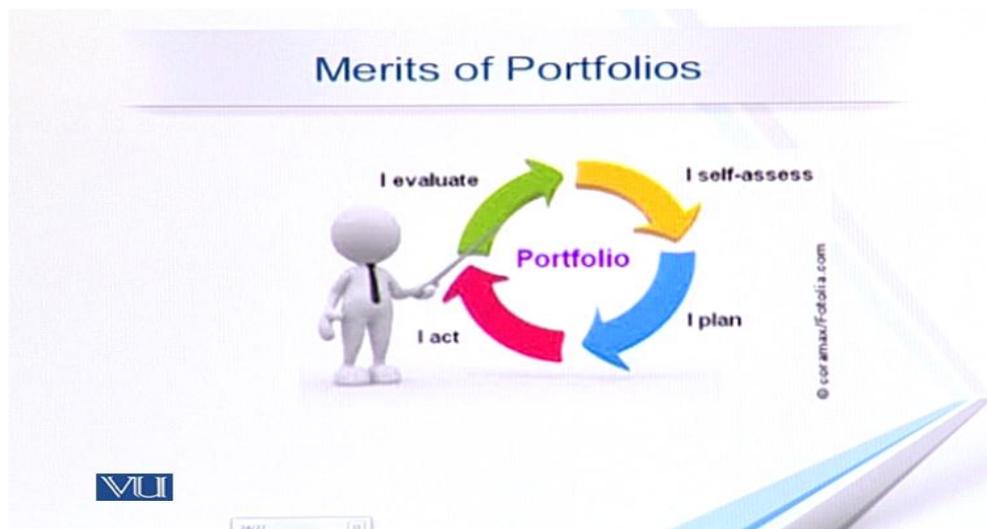
Topic 64: Process and Showcase Portfolios

- Process portfolio records all phases of the learning process. They are particularly useful in documenting students' overall learning.



- Whereas showcase portfolio shows a record of your best achievements throughout the session with the purpose of assessment.

Topic 65: Merits of Portfolios



- Individualized instruction
- Self learning and competence
- Confidence

- Self trust
- Healthy competition with others
- Helping each other

Topic 66: Demerits of portfolios

- Measures relatively superficial knowledge
- Sometimes do not match the specific goals of program.
- Norm- referenced data may be less useful than criterion-referenced.
- More summative user and difficult to receive the results in a formative manner.

Reflective writing provides an opportunity for you to gain further insights from your work through deeper reflection on your experiences.

Topic 69: Assessment of Diary Writing

A diary records behavior over a period of time. Often the information recorded shows changes in behavior, trends in performance, results of participation, progress or the regularity of physical activity. Students can be assessed on the basis of these standards.

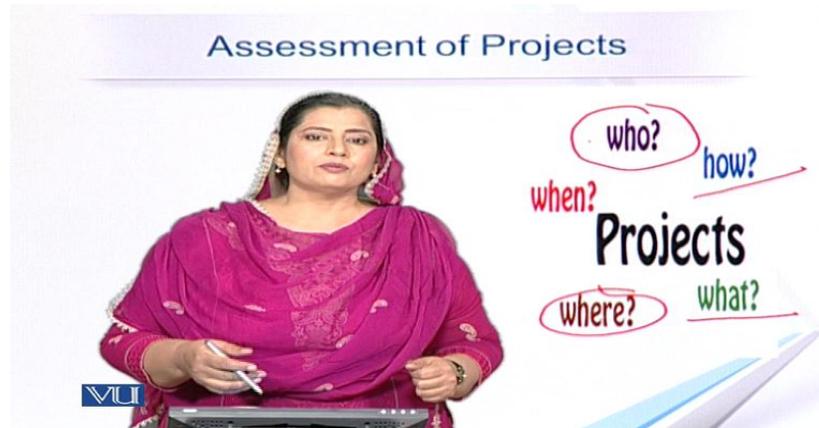
Topic 70: Projects as a Part of Class Work

Projects assess student's understanding of a subject or a particular topic. Projects typically require students to apply their knowledge and skills while completing the prescribe task.

Individual projects assigned to a student require student's knowledge, critical thinking, application of knowledge, time and work plan.

Group projects involve a number of students working together on a complex problem that requires planning, research, internal discussion and presentation. Group projects should include a component that each student completes individually.

Topic 71: Assessment of Project



Students can be assessed on the basis of these standards given in the figure.

Topic 72: Merits and Demerits of Projects**Merits**

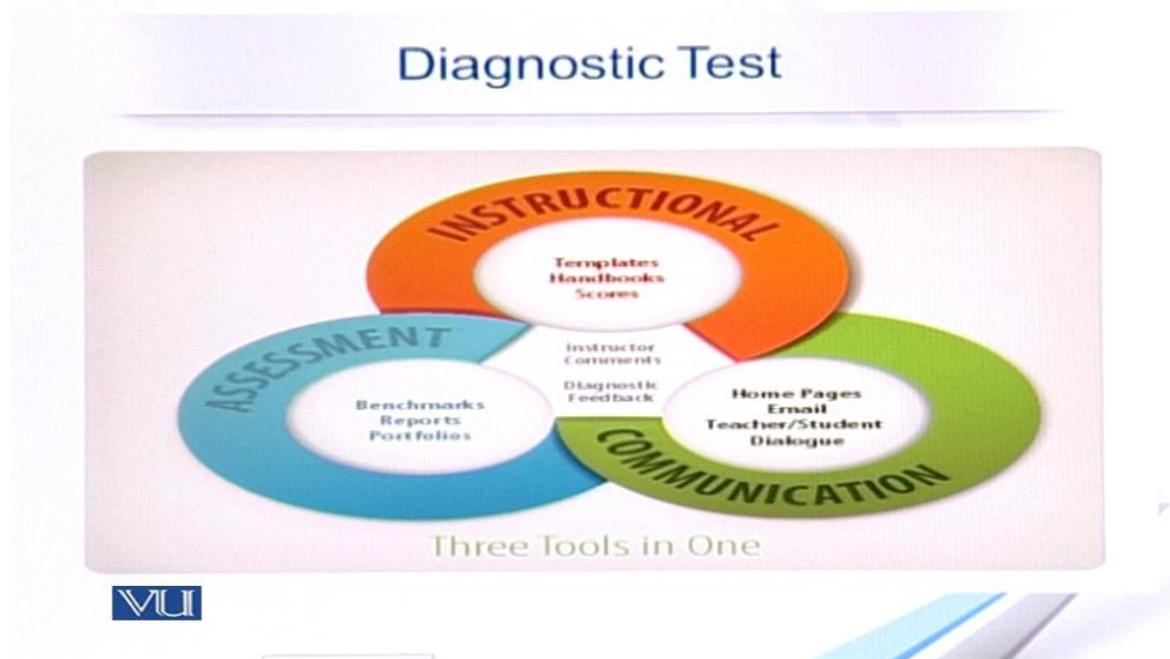
- Individualized instruction
- Self learning and freedom
- Confidence
- Self trust
- Critical thinking
- Healthy competition with others
- Helping each other
- Social interaction

Demerits

- Time consuming
- Financial resources
- Control
- Just focus on the project
- Clarity about assessment

LECTURE 12**TYPES OF TESTS****Topic 73: What is a Test?**

A procedure used to establish quality, performance or reliability of something (here the quality of teaching and learning). There are different types of tests.

Topic 74: Diagnostic Test

Diagnostic tests measure students' weaknesses in subject area or skills. Teachers typically administer diagnostic test for reading and math skills, using the results to provide remedial instruction.

Topic 75**Standardized tests**

A standardized test is any form of test that:

1. Requires all test takers to answer the same question or a selection of questions from common bank of questions, and that
2. Is scored in a “standard” or consistent manner, which makes it possible to compare the performance.

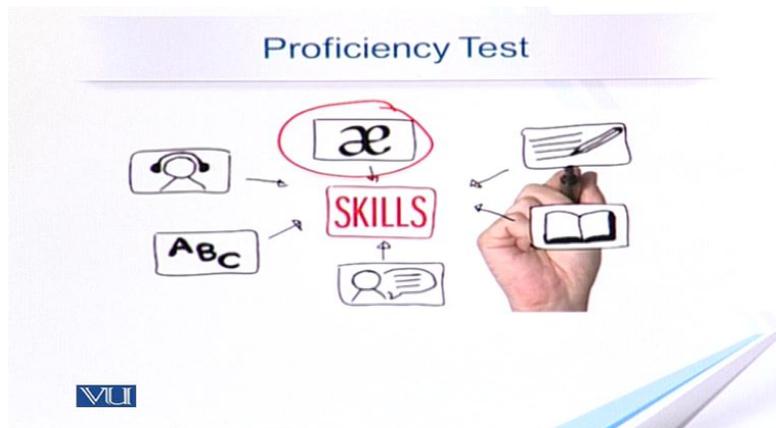
Topic 76

Achievement test

An achievement test is a test of skill and knowledge gained in a grade or level, usually through planned instruction, such as training or classroom instruction. Achievement is tested against certain objectives.

Topic 77

Proficiency test



A proficiency test measures a learner’s level of language. It can be compared with an achievement test, which evaluates a learner’s proficiency of specific skills.

Topic 78

Psychometric test

A psychometric test is an objective and standardized measure of a sample behavior.

LECTURE 13**OBJECTIVE TYPE QUESTIONS****Topic 79: Types of Questions**

Objective: Yes/No Questions



Yes/No questions are simple questions with two possible responses. Such questions allow the rapid assessment of large amounts of material.

There is very little educational benefit in using these questions.

Topic 80: True/False/Not Given

The student:

- Analyses a statement
- Assess whether the information is true or false or not given.
- Marks an answer
- Effective
- Simple logic
- More reliable than yes/no questions

Topic 81: Filling the Blanks

- In practice
- Simple logic
- Particular/common information
- Information and vocabulary

- Close test
- Needs more comprehension

Topic 82: Multiple Choice Questions

- One statement with choices given to be filled
- Correct answers with distractors
- Students analyze the statement and mark the correct answer

Topic 83: Matching Sentences/Columns

- Two lists of words/phrases/sentences
- Multiple choice
- Used for recognition of relationships and making associations
- Used for a wide range of subject matter

Topic 84: Assessment of Objective Questions

- Easy to make and mark
- Standardized responses
- Should be written with clarity
- Clearly communicated

LECTURE 14**OTHER TYPES OF QUESTIONS****Topic 85: Some Other Types of Questions****Arranging information**

- Sequencing events in a story.
- Analysis and reasoning is used and the information is arranged in a correct sequence. Re-writing or the use of vocabulary is not required from the student's side.
- Such questions can be assessed like objective questions, so there is no difficulty in marking them. Reasoning can be tested, but these type of questions cannot be used in all of the subjects.

Topic 86: Labeling a Figure/Diagram

- Exact knowledge about specific parts is required to attempt the question which means the students must be having the complete understanding of the object being asked about.
- Such questions are normally used in science or geographical subjects. These might used not to be in every subject. These are assessed as objective questions.

Topic 87: Short answers

The student needs to give:

- Precise information
- Specific information
- Complete understanding

Topic 88: Some Other Types of Questions**Assessing Short Answers**

These can also be covered under the heading of objective questions. Students may often memorize short answer questions with rote learning. If assessors wish to use short answer questions to assess deeper learning, careful attention (and many practices) on appropriate

questions are required. It is very important that the assessor is very clear on the type of answers expected when setting the questions, because these are open-ended questions, students are free to answer any way they choose; short answer questions can lead to difficulties in grading if the question is not worded carefully.

Topic 89: Essay Type Answers

- Very common
- Explain in detail, based on the information
- Critical analysis
- Cause/effect
- Compare/contrast

Answers are written according to the general rules of academic writing. Use indications; being each paragraph with a topic sentence; support the topic sentence(s) with reasons and/or examples; use transition words to show logical organization; write a conclusion. Use correct punctuation throughout.

Topic 90: Assessing Essay Type Answers

- Introduction
- Explanation
- Critical analysis
- Cause/effect
- Compare/contrast
- Academic writing
- Coherence
- Summing up and conclusion

LECTURE 15**OBJECTIVES****Topic 91: Objectives and Assessment****What is an objective?**

- A specific result that a person or system aims to achieve within a time frame and with available resources.
- Something that one’s efforts or actions are intended to attain or accomplish; purpose; goal; target; the objective of this lesson; the objective of a seminar; the objective of a fund raising etc.

Topic 92: Difference between an Aim and Objective

- The aims of a course are broad statements of its purpose or intent. The aim encompasses the purpose and philosophy of the course, specifying its overall direction and content. - - They let students know what you will be teaching them over a study period and what they may learn by taking the course.
- Learning objective is to be explicit about what the students do, and what we need them to learn to achieve the aim. Learning objectives may be written with respect to knowledge, skills and attitudes. For an objective to be claimed it must be assessed; therefore there must be an alignment between objectives and assessments.

- **The principal difference between aims and objectives is that aims represent the broad goal of your course while the objectives are the steps the students need to take in order to get there.**

Topic 93: Teaching Process Reflective Objectives

- Objectives articulate the knowledge and skills you want students to acquire by the end of the course.
- Instructional strategies are chosen to foster students learning towards meeting the objectives.
- Methods, techniques, strategies and materials all are decided in the light of objectives.

Topic 94: Linking Objectives with Assessment

- Objectives articulate the knowledge and skills you want students to acquire by the end of the course,
- Assessment allows the instructor to check the degree to which the students are meeting the learning objectives.
- Assessment must align with the instructional techniques; otherwise objectives will not be attained.

Topic 95: Objectives and Assessment: Examples

Example # 1 Teaching of definitions

Assessment: Define so and so

Example 3 2 Teaching explanations

Assessment: Define, explain

Example # 3 Teaching diagrams

Assessment: Draw a picture of

Example # 4 Teaching comparisons

Assessment: compare, contrast

Topic 96: Mismatch b/w Teaching and Assessment

Example#1

Teaching: definitions

Assessment:

Explain.....

Example#2

Teaching:

Explanations

Assessment:

Compare, contrast

Example#3

Teaching:

Comparisons

Assessment: draw a picture.....

LECTURE 16**BLOOM'S TAXONOMY****Topic 97: What is Taxonomy?**

- Taxonomy is the science of classification according to a predetermined system, whose resulting catalogue is used to provide a conceptual framework for discussion or analysis.

Topic 98: Bloom's Taxonomy

- Bloom's Taxonomy was created in **1956** under the leadership of educational psychologist **Dr Benjamin Bloom** in order to promote higher forms of thinking in education, such as analyzing and evaluation concepts, processes, procedures and principles rather than just remembering facts (rote learning).
- It is most often used when designing instruction or learning processes. One gets clear about the level and depth of learning process. It is helpful in writing objectives and then in forming questions.

Topic 99: Bloom's Taxonomy**Three Domains**

Cognitive: Mental skills (knowledge)

Affective: Growth in feelings or emotional areas (attitude or self)

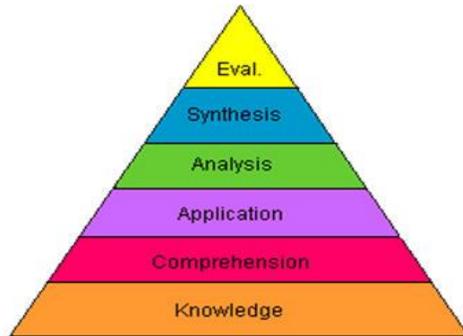
Psychomotor: Manual or physical skills (skills)

Topic 100: Explanation and Significance

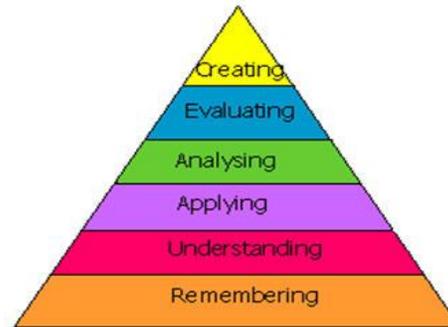
- Words tend to convey wide range of meanings.
- Domains can be thought of as categories.
- Three categories are referred as KSA (Knowledge, Skills, Attitudes or Abilities)
- Taxonomy of learning behaviors may be thought of as “ the goal of the learning process”.
- After a learning activity, learner should have acquired a new skill, knowledge and attitude.

Bloom's Taxonomy Updated

Old Version



New Version



(Overbaugh, 2009)

Topic 101: Cognitive Domain

- The most-used of the domains refers to knowledge structures (although sheer “knowing the facts” is its bottom level). It can be viewed as a sequence of progressive contextualization of the material.

Changes in Bloom's Taxonomy

- There is an interchange of two top levels: Evaluation and Synthesis.
- The names of six major categories were changes from noun to verb forms.
- Comprehension and synthesis were retitles to understanding and creating respectively.

Topic 102: Explanation of Cognitive domain

Knowledge: Familiarity

Comprehension: Understanding

Application: Use of knowledge

Analysis: Differentiation into parts

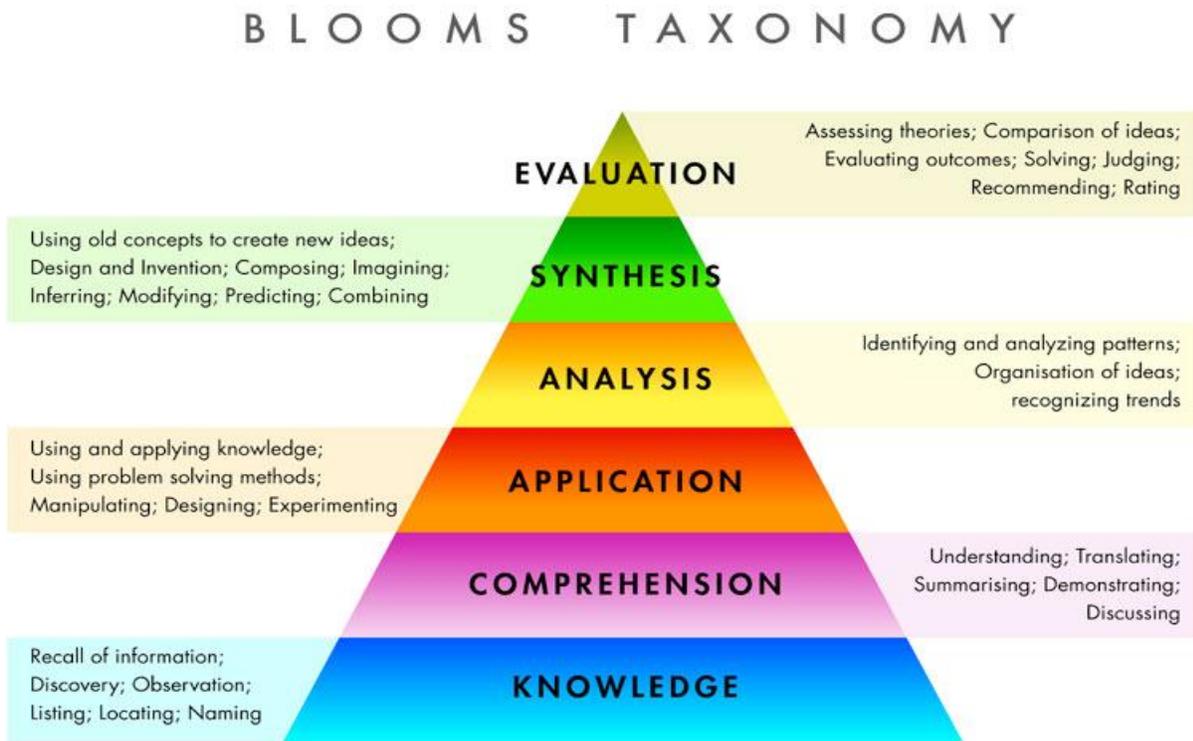
Synthesis: Creation

Evaluation: Judgements

LECTURE 17**KNOWLEDGE LEVEL OF BLOOM'S TAXONOMY****Topic 103: Knowledge Level**

What is Knowledge level?

- Exhibits previously learned materials by recalling the facts, terms, basic concepts and answers.

**Topic 104: Knowledge Level**

At Knowledge Level of Learning a student can define terms.

Related Verbs and Words

- Arrange
- Define
- Describe
- Duplicate
- Identify
- Label

- List
- Match
- Memorize
- Name
- Outline
- Recognize
- Relate
- Recall
- Repeat
- Reproduce
- State
- Who
- What
- When

Recalling and remembering previously learned information is knowledge level.

Topic 105: Knowledge Level Objectives

Knowledge refers to rote memorization of facts and information.

1. Students will be able to define nouns.
2. Students will be able to name the items given in the pictures.

Topic 106: Knowledge Level Questions

These questions test rote memorization of facts or information.

For example:

What is.....? Where is...? When did.....?

1. What is a noun?
2. Define the concept of action words?

Topic 107: Same level Objectives and Questions

Example 1:

Objective: Students should be able to define noun.

Question: What is a noun?

Example 2:

Objective: Students should be able to name the places shown in the map.

Question: where is this place located?

Topic 108: Mismatch b/w Objectives and Questions

The objectives and assessment of some course do not show the same level of cognition.

Example:

Objective: students should be able to define noun.

Question: Explain the function of noun in a paragraph?

Example:

Objective: students should be able to name the places in the map.

Question: Discuss the importance of the places shown in the map?

LECTURE 18**COMPREHENSION LEVEL OF BLOOM'S TAXONOMY****Topic 109: Comprehension Level****What is Comprehension level?**

- Demonstrating understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions and stating main ideas.

Topic 110: Related Verbs and Words

- Demonstrate
- Interpret
- Explain
- Extend
- Illustrate
- Infer
- Outline
- Relate
- Rephrase
- Translate
- Summarize
- Show
- Classify

Grasping the meaning of information is comprehension.

Topic 111: Comprehension Level Objectives

At this level learner can restate in his own words that he has stored in memory.

1. Students will be able to explain the theory.
2. Students will be able to discuss the global warming.

Topic 112: Comprehension Level Questions

These questions test the understanding about of facts or information.

How is...? Why is....?

1. How does global warming affect us?
2. Explain the role of action words?

Topic 113: Same Level Objectives and Questions**Example 1:**

Objective: students should be able to explain global warming.

Question: Discuss the concept of global warming?

Example 2:

Objective: Students should be able to paraphrase the poem.

Question:

Explain the following stanza with reference to the context?

Topic 114: Mismatch b/w Objectives and Questions

The objectives and assessment of some course do not show the same level of cognition.

Example:

Objective: Students should be able to summarize the poem.

Question: Evaluate the poem?

Example:

Objective: students should be able to interpret the story.

Question: Review the story?

LECTURE 19**APPLICATION LEVEL OF BLOOM'S TAXONOMY****Topic 115: Application Level**

This level refers to applying gained knowledge to actual situations

Topic 116: Related Verbs and Words

Apply, build, construct, develop, Interview, make use of, organize, solve, utilize, model etc.

Solving problems by applying acquired knowledge, facts, techniques and rules.

Topic 117: Application Level Objectives

Knowledge and understanding are applied to solve some problem or build further knowledge.

1. Students will be able to solve the mathematical problem.
2. Students will be able to suggest some reforms.

Topic 118: Application Level Questions

These questions test the ability to apply your knowledge.

How will you...?

1. Solve the following problem?
2. How will you arrange the following words into a meaningful sentence?

Topic 119: Same Level Objectives and Questions

Example:

Objective: Students should be able to apply this formula for mathematical problem.

Question: Are these mathematical answers correct?

Example:

Objective: Students should be able to modify the given passages.

Question:

How will you change this paragraph into interrogative?

Topic 120: Mismatch b/w Objectives and Questions

The objectives and assessment of some course do not show the same level of cognition.

Example:

Objective: Students should be able to find the moral of the story.

Question: Compare the story with a plot of a novel?

Example:

Objective: Students should be able to apply their understanding to make correction.

Question: what are the positive points in the given paragraph?

LECTURE 20**ANALYSIS LEVEL OF BLOOM'S TAXONOMY****Topic 121: Analysis Level****What is analysis level?**

Examining and breaking information into parts by identifying motives or causes;

Making inferences and finding evidence to support generalizations.

Blooms taxonomy

Topic 122: Related Verbs and Words

Analyze, categorize, classify, compare, contrast, discover, divide, examine, inspect, simplify, test for distinguish, distinction, theme, relationships, function, motive, inference, assumption.

Breaking down objects or ideas into simpler parts and seeing how the parts relate and are organized.

Topic 123: Analysis Level Objectives

One should be able to analyze a system and divide into its constituent parts.

1. Student should be able to understand the parts of a microscope.
2. Students will be able to recognize the parts of speech.

Topic 124: Analysis Level Questions

These questions test the ability to analyze an item or system on the basis of learning.

What are the parts or features of ...?

1. Distinguish between hard disc and removable disc?
2. How will you analyze the role of light in photosynthesis?

Topic 125: Same Level Objectives and Questions**Example:**

Objective:

Students should be able to divide the system into its parts.

Question:

Recognize the parts of the system and place them correctly?

Example:

Objective: Student should be able to differentiate between antonyms and synonyms.

Question:

Replace the given words by synonyms.

Topic 126: Mismatch b/w Objectives and Questions

The objectives and assessment of some course do not show the same level of cognition.

Example:

Objective:

Students should be able to infer the message carried by each paragraph.

Question:

Evaluate this paragraph?

Example:

Objective: Students should be able to contrast these two devices.

Question: Synthesize the function of two devices?

LECTURE 21**SYNTHESIS LEVEL OF BLOOM'S TAXONOMY****Topic 127: Synthesis Level****What is Synthesis Level?**

The level refers to compiling information together by combining elements in a new pattern or proposing alternative solutions.

Blooms Taxonomy.

Topic 128: Related Verbs and Words

Combine, Compile, Compose, Construct, Create, design, develop, estimate, formulate, invent, originate,
plan, Propose, Solution, suppose, modify, improve, adapt, minimize, maximize, delete, theorize, elaborate, improve.

Rearranging component ideas into a complete presentation.

Topic 129: Synthesis Level Objectives

Knowledge and understanding are applied to compile information to build or pattern.

1. Student will be able to complete the story with the help of hints.
2. Students will be able to rearrange the jumbled words to make a sentence.

Topic 130: Synthesis Level Questions

These questions test the ability to construct/ synthesize something on the basis of your learning.

What changes would you make...?

1. How will you design your classroom for language learning activities?
2. How will you assemble the following words into a meaningful sentence?

Topic 131: Same Level Objectives and Questions

Example:

Objective:

Student should be able to give their judgment about inactive teaching.

Question: Do you recommend interactive teaching?

Example:

Objective:

Students should be able to evaluate the novel?

Topic 132: Mismatch b/w Objectives and Questions

The objectives and assessment of some course do not show the same level of cognition.

Example:

Objective:

Student should be able to compare a story from the pictures.

Question: Evaluate the story shown in picture?

Example:

Objective:

Students should be able to construct a model for teaching.

Question:

Evaluate teaching material?

LECTURE 22**EVALUATION LEVEL OF BLOOM'S TAXONOMY****Topic 133: Evaluation Level****What is evaluation level?**

This level refers to making judgments about information validity of ideas or quality of work based on a set of criteria.

Blooms Taxonomy

Topic 134: Related Verbs and Words

Awards, Criticize, decide, defend, evaluate, judge, justify, compare, mark, rate, recommend, appraise, support, prove, disprove, assess, value, estimate, etc.

Making judgments based on evidence or criteria.

Topic 135: Evaluation Level Objectives

Blooms Taxonomy

Knowledge and understanding are applied to judge and evaluate something.

1. Students will be able to assess the system of taxation.
2. Students will be able to give their opinion about educational reforms.

Topic 136: Evaluation Level Questions

These questions test the ability to judge something on the basis of your learning.

Can you access the value...?

1. How will you justify the educational reforms?
2. Do you value the changing methodologies of teaching?

Topic 137: Same Level Objectives and Questions

Example:

Objective:

Students should be able to compile the information into a report.

Question:

Write a report of your project?

Example:

Objective:

Students should be able to improve the given plan.

Question:

Formulate a new plan by mentioning the flaws of the previous one?

Topic 138: Mismatch b/w Objectives and Questions

The objectives and assessment of some course do not show the same level of cognition..

Example:

Objective:

Students should be able to give their opinion about abstract art.

Question: Define abstract art?

Example:

Objective: Students should be able to give their judgment about economic conditions prevailing today

Example:

Question: How do you comment about the social condition ' prevailing today?

LECTURE 23**ITEM ANALYSIS I****Topic 139: Item Analysis****What is Item Analysis?**

Item and distracter analysis

Item analysis is a process which examines student responses to individual test items (questions) in order to assess the quality of those items and of the test as a whole.

Item Analysis deals with:

- Item Difficulty
- Item Discrimination
- Effectiveness of Distractors

Topic 140: What is Item Difficulty?

- Item difficulty is simply the percentage of students taking the test who answered the item correctly.
- The larger the percentage getting an item right, the easier the item.
- For instance, if the percentage of correct answer is 85%, it means the item is very easy.
- If the percentage is 15%, it means the item is very difficult.
- The proportion for the item is usually denoted as p and is called item difficulty (Crocker & Algina, 1986)

Topic 141: Calculating Item Difficulty

P : Correct Responses/ Total Responses

$$P = \frac{H+L}{N}$$

H is high scorers with correct responses

L is low scorers with correct responses

N is total number of students.

For instance:

Total Responses::42

Correct

Responses:18

$p=18/42: 0.42$

For instance:

Total Responses: 40

Correct responses=35

$p=35/40: 0.87$

High	Medium	Low
(Difficult)	(Moderate)	(Easy)

$\leq 30\% > 30\%$ AND $< 80\% \geq 80\%$

P= Correct

Responses/Total Responses

Item difficulty should be moderate.

Topic 142: High and Low Performers

When the test result is divided and arranged into two groups on the basis of total scores.

Topic 143: What is Discrimination Index?

The ability of the test to differentiate between good (High Scoring) and poor (Low Scoring) students

Topic 144: Calculating Discrimination Index

$D= H-L/ N$

H is high scorers with correct responses.

L is low scorers with correct responses.

N is total number of students.

For instance:

H=12

L=3

$$N=15$$

$$D=12-3/15=.60$$

$$D= H-L/ N$$

Its value should be around .50-.75.

LECTURE 24**ITEM ANALYSIS II****Topic 145: More About Item Analysis****More about Item Analysis Distractors**

Item Analysis deals with:

- Item Difficulty
- Item Discrimination
- Effectiveness of Distractors

Distractors are various alternatives chosen to be as close as possible to the right answer. In good test construction, all distractors should be feasible and reasonable and should apply directly to the stem.

Topic 146: What is Distractor Analysis?

The best distractor is one that contains the common mistakes that students will make.

In distractor analysis, however, we are no longer interested in how test takers select the correct answer, but how the distractors were able to function effectively by drawing the test takers away from the correct answer.

Topic 147: Analyzing Distractor

$$D = \frac{H-L}{N}$$

H is high scorers with correct responses

L is low scorers with correct responses

N is total number of students

Each column is showing a different value as it has been calculated for each distractor separately.

Topic 148: Interpretation of the Analysis

The value .33 is acceptable because it discriminates between high and low. The value for distractor B is 0 so no discrimination between high and low groups. C has been chosen more by the weak students.

Topic 149: Putting Responses on a Sheet

By looking at the sheet, you can know about the responses to distractors.

Topic 150: Significance of Distractor Analysis

- Distractor analysis can be a useful tool in evaluating the effectiveness of distractors. When distractors are not effective, they are virtually useless.
- Good quality distractors ensure that the outcome of the tests provides more credible and objective picture of the knowledge of the test takers.

LECTURE 25**MARKING****Topic 151: Marking and Assessment****What is Marking?**

Marking is when you set a certain standard numerically about certain task. Here we are discussing the work oral or written.

To identify what is required for achievement of each of the grades being awarded .Student work is then judged to fall at a given point within the range of descriptors.

- Marks
- Grades
- Percentage

Topic 152: Clarity in Questions

Questions should be written very clearly. There should be no confusion what to be answered.

Students cannot answer correctly if they are confused about the statements of questions.

Topic 153: Clarity in Marking Scheme

Marking scheme should be clearly conveyed to students that will help them to arrange their answers as is required

For instance:

Q. What is Bloom's taxonomy? (10)

Or

a. Name three domains of Bloom's taxonomy. (1.S)

b. How does this taxonomy help in context of teaching and learning? (8.5)

Topic 154: Level of Question and Marks

For instance:

Q. What is Bloom's taxonomy? (10)

Or

- a. Name three Domains of Bloom's taxonomy.(1.5)
- b. How does this taxonomy help in context of teaching and learning? (8.5) w

Distribution of marks should be decided according to the levels of cognition. The lower the level, the lesser the marks. Similarly more marks will be allocated to higher level questions.

Topic 155: Co-ordinations

A coordination must be maintained starting from objective to teaching and then to questions of assessment.

This co-ordination must be perceived in the allocation of marks also. For instance:

1. Objective: Knowledge level
2. Teaching and assessment: Knowledge level
3. Marks: 2-3

Topic156: Sharing with Students

This co-ordination must be shared with the student.

For instance:

1. Objective: Knowledge level
2. Teaching and assessment: Knowledge level
3. Marks: 2-3

LECTURE 26**RUBRICS I****Topic 157: Rubrics****What are Rubrics?**

A rubric is a scoring tool that teachers use to assess student learning after a lesson.

A rubric usually in the form of a matrix or grid; is a tool used to interpret and grade students' work against criteria and standards. Rubrics are sometimes called "criteria sheets", "grading schemes", or "scoring guides".

Topic 158: Elements in Rubrics

A set of criteria that provides an interpretation of the stated objectives (performance, behavior, quality).

A range of different levels of performance between highest and lowest.

Descriptors that specify the performance corresponding to each level, to allow assessors to interpret which level has been met.

Topic 159: Example from IT

This should be noted that starting from the highest point, the standards set over here, gradually move towards lower standards.

Topic 160 Example from Speaking Task

Certain standards have been set and then levels of performance have been defines against these standards.

Topic 161 Objectives & Rubrics

Learning objectives -----Institutional activities-----Assessment

Objectives of a lesson or topics help in setting rubrics.

Whatever is needed as objectives, must be reflected in the grid of rubrics.

LECTURE 27**RUBRICS II****Topic 162: Significance of Rubrics**

Using a set of criteria and standards (directly tied to the stated learning objectives), educators can assess each student's performance on a wide variety of work, ranging from written essays to class projects.

A rubric makes explicit a range of assessment criteria and expected performance standards. Assessors evaluate a student's performance against all of these, rather than assigning single subjective score. :

Using a set of criteria and standards (directly tied to the stated learning objectives), Educators can assess each student.

Topic 163: More about Rubrics

Assessment rubrics can be used for assessing learning at all levels, from assignments, a course projects, larger research or design projects and learning portfolios.

Topic 164: Challenges

When learning outcomes relate to higher levels of cognition (for example, evaluating or creating).

It can be difficult to include different dimensions.

- When changing these detailed standards to grades.
- Workload for teachers.
- Students sometimes depend too much on these standards.

Topic 165: Some Requirements

Prepared and available for students well before they begin work on tasks

Discuss assessment rubrics with students in class

Students should be familiar with these standards.

Practice using rubrics in class

Frame your assessment

Feedback to students in the terms laid out in the rubric.

Involve students while forming rubrics.

Topic 166: Developing Rubrics

Develop the goals.

Select the assessment tasks.

Develop performance standards.

Differentiate performances.

Assign marks to these categories.

Topic 167: Scoring Rubrics

- Exemplary
- Good quality
- Average
- Below average

1st at the top is related to the best performance. The last shows the least level. Two in the middle is related to average. According to the subject and objectives, the remaining grid is filled.

LECTURE 28**DISPLAYING THE DATA****Topic 168: Displaying Data**

Tally marks also called hash marks show numeral system. They are a form of numerical used for counting. They are most useful in counting. These are used in different areas including assessment and research. We should have a set of data which can be stored in tallies. It is represented by a small line.

Topic 169: Representation

We use these lines to store data. You can see that tallies do not carry numbers, but serve as numbers for counting etc.

Topic 170: Tables

The simplest style for displaying data is tables. There are different types of tables.

This way tables help us a lot, from simple of difficult areas.

Topic 171: Graphs

A diagram showing the relation between variable quantities, typically of two variables. each measured along one of a pair of axes at right angles.

Topic 172: Some Principles

There are certain principles of displaying data. For instance, we must keep in mind:

- A relationship tries to show a connection or correlation.
- A comparison tries to set one set of variables a part from another.
- A composition tries to collect different types of information.
- A distribution tries to lay out a collection of related or unrelated.

Topic 173: Some Recommendations**Sorting and re-grouping data.**

Transforming raw data into indicators such as percentages, rates and ratios.

Presenting the data and indicators in tables, charts and texts which enable easy analysis, interpretation and use.

LECTURE 29**ITEM DEVELOPMENT****Topic 174: Item Development**

The term item is used as a shorthand for questions on the test. Item development can proceed only when a clearly agreed upon set of objectives is available.

It is advised that an item should measure only a single objective.

Each objective, however, should be measured by one or several items, depending on the test specifications.

Topic 175: Item Format

The format of the item necessarily proceeds from the test blueprint. The blueprint indicates the kinds of skills and the balance of test content to be measured. The selection of item types and test format should be based on the kinds of skills to be measured and not on some personal like or dislike for a particular item format.

Topic 176: Objective Questions

- Write with clear terminology.
- Clear statement.
- Avoid confusions.
- Keep each item separate.
- If more options than one are correct, ask for the best answer.

- Complete requirement.
- Correct grammar.
- None of the above' should not be used as options.
- Bring variety.

Topic 177: Essay Test Items

Essay items are useful when examinees have to show how they arrived at an answer.

A test of writing ability is a good example of the kind of test that should be given in an essay response format.

This type of item, however, is difficult to score reliably and can require a significant amount of time to be graded.

Grading is often affected by the verbal fluency in the answer, handwriting, presence or lack of spelling errors, grammar used and the subjective judgments of the grader.

Topic 178: Marking Scheme

Marking scheme should be clear and relevant.

For instance:

Q. What is assessment? (10)

And compare this question:

Q. a. Define assessment. (2)

b. Discuss the role of assessment in a classroom. (8)

LECTURE 30**OUTCOMES OF ASSESSMENT****Topic 179: Outcomes of Assessment**

Assessment is related to the targets of learners and tests them about these targets. This way, it helps to mark the position of some learner.

Assessment approaches promote learner engagement and encourage learners to become more independent in their learning.

Topic 180: Learner's Skills

Assessment promotes learner engagement and encourages learners to improve their skills.

Speaking, writing, listening, thinking all refer to different skills. Assessment helps learners to improve their skills.

Topic 181: Learner's Knowledge

We enhance our knowledge with the help of assessment.

Different materials and techniques polish our capabilities.

It helps those also to improve their knowledge who considers assessment as a pressure.

Topic 182: Guiding Teaching

Assessment guides teachers as well about their teaching materials and techniques.

If learners have a picture about learning quality, teachers can also have an idea how they have performed as teachers.

Topic 183: Involving Many Parties

Assessment involves many parties directly and indirectly. For instance your teacher is a direct party. Your principal also might be taken as a direct party.

But those sitting in the finance office or publishing your question papers are the example of indirect parties.