

EDUCATION 5.0

PERSPECTIVES

AND


PREVIEWS

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2. **Basic:** Technology is used or available occasionally/often in a lab rather than the classroom. Students are comfortable with one or two tools and sometimes use these tools to create projects that show understanding of content.
3. **Comfortable:** Technology is used in the classroom on a fairly regular basis. Students are comfortable with a variety of tools and often use these tools to create projects that show understanding of content.
4. **Seamless:** Students employ technology daily in the classroom using a variety of tools to complete assignments and create projects that show a deep understanding of content.

Despite the dramatic differences in resources and abilities from classroom to classroom, school to school, and district to district, it's possible to integrate technology tools in ways that can impact engagement and learning for all students.."

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[https://www.edutopia.org/technology-integration-guide-description.](https://www.edutopia.org/technology-integration-guide-description)

ASSESSMENT OF LEARNING: TEST CONSTRUCTION PRINCIPLES

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Abstract

This paper attempts to clarify the steps involved in the constructing of an achievement test. As the article explains the procedures of constructing an achievement test, it deals with the concepts of assessment, need and scope; further it collects the details on the general principles of writing test items in an achievement test. As the heart part of this article, it brings all the types of test items and the procedure of writing test items with illustrations.

Key Words: *Assessment, Achievement test, Construction of test item.*

Assessment:

Assessment in educational setting may describe the progress students have made towards a given educational goal at a point in time. It is not concerned with the explanation of the underlying reasons and does not proffer recommendations for action. In the classroom, assessment refers to all the processes and products which are used to describe the nature and the extent of pupils' learning.

Definition:

Assessment is generally for measuring or determining personal attributes to describe the progress of the students towards a given educational goal during the programme or course.

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Scope:

- I. It helps to find the strength and weakness of a learner in the learning
- II. It helps to identify the personal attribute of the learners
- III. It gives direct feedback on Diagnosis
- IV. It helps indirectly for instructional planning
- V. It follows the principles of constructivism

Needs:

- I. To determine that the intended outcomes of the course are being achieved
- II. To provide feedback to students on their learning, enabling them to improve
- III. To motivate the students to take appropriate learning activity
- IV. To support and guide in learning
- V. To arrange for individual attention
- VI. To support in terms of supervised study
- VII. To demonstrate that the appropriate standard is being maintained
- VIII. To evaluate the teaching

Functions:

1. Providing timely feedback regarding the attention of the learners
2. Helping the students to take decision and review their performance regularly
3. Generating the marks and grades to students to reflect on
4. To get the attention of the learners
5. Generating appropriate learning activity
6. Attempts to meet the individual needs

Types:**Diagnostic Assessment:**

It is often undertaken at the beginning of a unit of study to assess the skills, abilities, interests, experiences, levels of achievement or difficulties of an individual or a whole class. It informs programming and planning, learning, and teaching methods used as well as assessment choices.

Formative Assessment:

It takes place in the day to day learning experiences, involves ongoing, informal observations throughout the term, course, semester or unit of study. It is used to monitor the progress of the students during the course of study.

Summative Assessment:

It assists the teacher to make judgments about students at certain relevant points in the learning process. (E.g. End of course, Project, Semester, Unit and Year)

Formal Assessment:

It involves the use of specific assessment strategies to determine the degree to which student has achieved the outcomes. It includes exams, essay writings, reports, assignments, presentations, performances, laboratories and workshops.

Informal Assessment:

It involves systematically observing and monitoring students during class learning and teaching. Asking doubts, clarifying doubts and casual questions are few examples.

Achievement Test:

Achievement test is an important tool in school evaluation and has great significance in measuring instructional progress and progress of the students in the subject area. Achievement means one's learning attainments, accomplishments, proficiencies, etc. It is directly related to the pupil's growth and development in educational situations. Any test that measures the attainments and accomplishments of an individual after a period of training or learning is called an achievement test.

Functions of Achievement Test:

The following are the objectives of the achievement test constructed by the teacher or the standardized one.

1. It provides basis for promotion to the next grade.
2. To find out where each student stands in various academic areas.
3. It helps in determination about the placement of the students in a particular section.
4. To motivate the students before a new assignment has taken up.
5. To know effectively the student is performing in theory as well as in clinical areas.
6. To expose pupil's difficulties which the teacher can help them to solve.

General Principles of Writing Items in Achievement Test:

The following are the principles to be kept in mind while constructing test items in an achievement test.

1. Instructions for each type of question must be available in the test.
2. Simple language is expected in every point of the test.
3. Test items must assess specific ability of the individual.
4. Devising the questions to apply the knowledge and skills is important.
5. Questions should be written in different formats of a question.
6. Preparation of alternate forms of the test is essential to have an alternative test.
7. The items should be phrased clearly.
8. The difficulty level of the items should be appropriate for the ability level of the group.
9. Different taxonomy levels must be included in the preparation of the test
10. The Questions must shuffled from the specific topic.
11. Scoring procedures must be clearly defined.
12. Optimal testing conditions need to be ensured.
13. Item analysis should be carried out.

Types of Objective type items:

The following are the different types of objective type questions.

1. Alternative Response Items
2. True-False Items
3. Fill-in the Blanks
4. Multiple Choice Item
5. Matching the Items

Alternative Response Items:

Alternative response item, by definition is the one that offers two options to choose from. They often consists of a declarative statement that the examinee is asked to mark true or false, right or wrong, correct or incorrect, yes or no, agree or disagree, or the like. Incomplete sentences providing two options to choose from to fill in the blank also fall in this category. Very common use of such items is to test the knowledge of grammar. Appropriate use 'tense' and also, contextual meaning of words or spelling mainly of words that sound alike.

True or False:

True-false tests include numerous opinion statements to which the examinee is asked to respond true or false. There is no objective basis for determining whether a statement of opinion is true or false. In most situations, when a student is the respondent, he guesses what opinion the teacher holds and marks the answers accordingly. The guidelines to frame true or false question are as follows.

- Avoid trivial statements.
- Avoid broad general statements.
- Avoid the use of negative statements, especially double negatives. When a negative word must be used, it should be underlined or put in italics so that students do not overlook it.
- Avoid complex sentences.
- Avoid including two ideas in one statement, unless cause-effect relationships are being measured.
- Avoid using opinion that is not attributed to some sources, unless the ability to identify opinion is being specifically measured.
- Avoid using true statements and false statements that are unequal in length.
- Avoid using disproportionate numbers of true statements and false statements.

Example

- The Industrial Revolution first began in Asia.
- Subhash Chandra Bose was the founder of Azad Hind Fauj.
- $\frac{2}{3}$ is a rational number.
- H_2SO_4 is the formula of sulphuric acid.
- Volume is indirectly proportionate to Temperature.
- In the nineteenth century, the Mughals lost their empire in India and the British established their supremacy over India.

Fill-in the Blanks:

Fill in the blanks *represents a blank which could be filled up by a short/word answer*. The format of the question may be a sentence. The following are the guidelines to frame questions.

- A direct question is generally more desirable than an incomplete statement.
- Do not take statements directly from textbooks to use as a basis for short-answer items.
- If the answer is to be expressed in numerical units, indicate the type of answer wanted.
- Blanks for answers should be equal in length and in a column to the right of the question.
- Do not include too many blanks.
- Do not start the question with Blank.

Multiple Choice Items:

The objective question will have three areas the Stem, the Keyed Answer and the Distracter. The stem is the question which seeks answer. Among the four choices the answer is called key and the rest of the choices are called distracters. The guidelines are as follows.

- Be sure that the stem clearly formulates a problem.
- Stem should be written either in direct question form or in an incomplete statement form.
- The stem of the item should present only one problem. Two concepts must not be combined together to form a single stem.
- Include as much of the item in the stem and keep options as short as possible.
- Unnecessary words or phrases should not be included in the stem.
- Avoid the use of negative words in the stem of the item.
- Use novel material in formulating problems to measure understanding or ability to apply

principles.

- Use plausible distracters as alternatives.
- Be sure that no unintentional clues.
- The correct answer should appear at each position in almost equal numbers.
- Avoid using 'none of the above', 'all of the above', both a and b etc. as options for an MCQ.
- Alternatives should be grammatically consistent with the stem. Grammatical inconsistency provides irrelevant clues.

Example

I my home work before the arrival.

a.) have done b.) am doing c.) have been doing d.) had done

Which expression, when completed correctly, is the largest state in India in terms of population?

(a) MP (b) UP
(c) WB (d) JK

Constructing Matching Items:

The matching block format consists of two lists and the pupil is required to correlate correctly one or more entries from one list with one or more entries from the other so that correct. The following are the guidelines for constructing the matching items.

1. Use only homogeneous material in a single matching exercise.
2. Include an unequal number of responses
3. Keep the list of items to be matched brief, and place the shorter responses on the right.
4. Arrange the list of responses in logical order. Place words in alphabetical order and numbers in sequence.
5. Ambiguity and confusion should be avoided.
6. Place all of the items for one matching exercise on the same page.

Example

| List I (Landmarks) | List II (Locations) |
|---------------------|---------------------|
| 1. India Gate | a. Jaipur |
| 2. Gateway of India | b. Delhi |
| 3. Hawa Mahal | c. Madras |
| 4. Howrah Bridge | d. Lucknow |
| 5. Fort St. George | e. Bhopal |
| f. Calcutta | g. Bombay |

Short Answer: The short –answer item and the completion item both are supply-type test items. Yet, they are included here for their simplicity. They can be answered by a word, phrase, number, or symbol. The following are the guidelines to be followed to frame short answer. They usually take less than five minutes to read and answer, many take less than a minute. They include some guidance on the extend of the answer required e.g. the size of answer, Space or specific instruction such as "In not more than 20 words ...", The answer is supplied by the pupil, not pre-selected as in objective questions. They can be grouped into two broad categories: a) extended answer b) insert and completion.

Examples

Give the titles of two books of Poet Vairamuthu and for each

Write any two principal characters.

a) Title 1:----- Characters: i) ----- ii) -----

b) Title 2: _____ Characters: i) _____ ii) _____

Construct an equilateral triangle with the sides measuring 4 cm.

State the properties of H_2SO_4

Essay Question Construction: There are two major purposes for using essay questions that address different learning outcomes. One purpose is to assess students' understanding of subject-matter content. The other purpose is to assess students' writing abilities. An essay question is a test item which contains the following four elements:

- Requires examinees to compose rather than select their response.
- Elicits student responses that consist of one or more sentences.
- No single response or single response pattern is correct.
- The accuracy and quality of students' responses to essays must be judged subjectively by a competent specialist in the subject.

Example

- Describe the attributes of a democracy.
- Propose a solution for the disposal of batteries that is friendly to users and the environment.
- Evaluate the impact of the Industrial Revolution on the family.

Conclusion:

A good achievement test requires much careful planning. A mere collection of questions whatever their number and individual quality, does not make a full test. The main considerations are to be in mind while planning a test are the coverage of behaviour implied by predetermined, the coverage of syllabus, the grouping and arrangement of items of various forms, and the number of items to be included in the test.

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