
UNIT 9 TEACHER MADE ACHIEVEMENT TESTS

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9.1 INTRODUCTION

Measurement, assessment and evaluation are integral parts of teaching-learning process. A teacher is directly involved in the assessment and evaluation of the achievement of a learner. Achievement refers to what a person has acquired or achieved after the specific training or instruction has been imparted. Thus, to measure what a pupil has learned, achievement tests are used.

On the basis of process of construction, achievement tests are classified into two categories, namely, non-standardized tests (commonly known as teacher made tests) and standardized tests. In general, teacher made achievement tests are used in classroom teaching learning situations. Practice of using standardized achievement tests in the daily teaching-learning process is very rare.

(Note : Few sections of the Unit have been partially taken from Unit-8 'Achievement Tests', ES-333 'Educational Evaluation', B.Ed., IGNOU, 2010)

In Units 5 and 7 of Block-1 of this Course, you have studied about various tools and techniques used for assessing scholastic and co-scholastic abilities of students. In Unit-6 of Block-1 of this Course, you have studied the criteria of a good tool and the differences between self-made and a standardised tool. Relating to this, in the present Unit, we will discuss the concept, importance and process of construction of teacher made achievement tests (TMAT) that are used in the teaching-learning process and examinations conducted in schools as well.

9.2 OBJECTIVES

After going through this Unit, you should be able to:

- define a teacher made achievement test (TMAT);
- differentiate between a standardized and TMAT;
- explain the purpose of TMAT;
- describe the steps involved in constructing TMAT;
- prepare and illustrate a blue-print for TMAT;
- write various types of items for TMAT;
- prepare TMAT for your students;
- administer TMAT in your class; and
- score and interpret the results after administering TMAT in your class.

9.3 UNDERSTANDING TEACHER MADE ACHIEVEMENT TEST (TMAT)

Assessment and evaluation are integral parts of every teaching-learning process. Teacher prepares achievement tests to know the progress of learning of the students as well as achievement of learning objectives. In this section, you will study the concept and purpose of teacher made achievement test (TMAT).

9.3.1 Concept of TMAT

Achievement refers to what a person has acquired or achieved after the specific training or instruction has been imparted. Thus, achievement tests are the tools to measure what a student has achieved after the specific instruction in a class.

Tests are classified on the basis of different criteria. For example, on the basis of the criterion of administrative conditions, tests have been classified into two categories- individual test and group test; on the basis of the criterion of scoring – objective test and subjective test; and on the basis of the criterion of standardization, tests are classified into standardized test and teacher made test.

Standardized tests are those which have been subjected to the procedure of standardization i.e. item analysis, establishing reliability and validity etc. In Unit-6, Block-2 of this Course, you have studied the difference between self-made/teacher-made and the standardised test. In that Unit you have also studied the criteria of a good tool i.e. reliability, validity, usability, objectivity and norms. In this section, you will learn more about the process of construction of TMAT.

Teacher-made tests are those that are constructed by teachers for use largely within their classrooms. Thus, teacher made achievement tests are those that are constructed by the teacher to assess learning progress of the students and also to identify if there is any learning difficulty to that particular content/concept. Preparing and using teacher-made test in teaching and learning is a regular task of teachers. For preparing teacher-made tests, objective type or essay type items or both can be constructed.

Classroom tests, chapter-end or unit-end test, quarterly, half-yearly, annual, and pre-board examinations, etc. are the examples of TMAT.

9.3.2 Purpose of TMAT

The purpose of teacher made achievement tests has been discussed in the previous section. You have studied earlier that TMAT especially provides an idea to the teachers about the progress and mastery of learning of the students. It also provides teachers feedback about how effective the teaching was, and whether the learning objectives have been achieved or not. It also provides teachers enough feedback to re-design his/her teaching and learning conditions to make it more effective. According to Gronlund (1981) TMATs can be used for a variety of instructional purposes. They are :

- To measure whether students possess the pre-requisite skills needed to succeed in a unit or course or to what extent students have already achieved the objectives of the planned instruction (Placement Evaluation);
- To monitor students' learning progress and to provide ongoing feedback to students and teacher about the success of the teaching-learning process (Formative Evaluation);
- To identify students' learning difficulties in any areas of learning, to investigate the causes of the learning difficulties and to provide adequate remedial instruction to maintain the gap of learning. Though every achievement test has some diagnostic value, but to diagnose the learning difficulties in detail, one cannot totally rely upon an achievement test. For this the teacher has to prepare diagnostic test which is fundamentally different from preparing achievement test (Diagnostic evaluation followed by remedial teaching) (refer Unit-11, Block-3 of this Course); and
- To assign grades and certify the students at the completion of any semester, year or entire programme (Summative evaluation). (refer Unit-3, Block-1 of this Course)

Check Your Progress 1

- Note :** a) Write your answer in the space given below.
b) Compare your answer with those given at the end of the Unit.

1. Define teacher made achievement test.

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2. Write any two examples of TMAT?

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3. Differentiate between TMAT and standardized achievement test.

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4. How does TMAT help the teachers to modify their teaching behaviour?

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**9.4 TYPES OF ACHIEVEMENT TEST ITEMS/
QUESTIONS**

Like any other test, quality of an achievement test is determined by the quality of its items. Commonly, classroom achievement test or TMAT consists of objective test items and performance assessments that require students to construct response (e.g. write an essay) or perform a particular task (e.g. prepare a model or measure the length etc.).

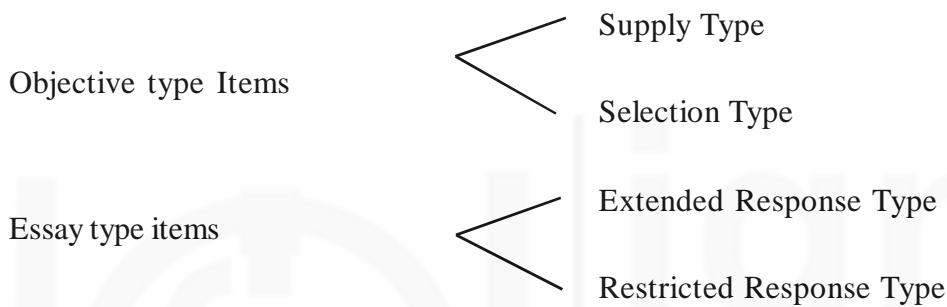
According to Linn and Miller (2005), objective test items are highly structured and require the students to supply a word or two or to select the correct answer from a number of alternatives. They are objective tests because they have a single right and the best answer that can be determined in advance. Performance assessment tasks may require the students to use

equipment, generate hypotheses, make observations, construct something e.g. a model, chart, etc., or perform for an audience (e.g. give a speech). For most performance assessment tasks, there is not a single right or best response – there may be a variety of responses that are considered excellent. There may be multiple ways of structuring the problem and organizing a response. Expert judgment is required to score the performances.

Thus, the items of an achievement test may be divided into two major categories:

- (i) Objective items, and
- (ii) Essay items.

According to Linn and Miller (2005), the major categories of objective test items or essay items may be further subdivided into the following basic types of test items and assessment tasks:



Let us discuss each type of achievement test items. The detailed discussions about various types of objective test items are as follows :

9.4.1 Objective Type Items

Do you know, what an objective item is? An objective item is free of all type of biases and subjectivity in scoring. In each objective type item, there is one and only one right answer. The student has to select the right answer from among the given options. In some objective type items, the student has to write the right answer either in a single word, number, or term. As presented above, objective items are broadly of two types : supply type and selection type items. Let us understand different supply type objective items.

(i) Supply type items: These items require student to supply the answer. This is also known as simple recall items. In such items, the teacher asks a short question expecting a quick one-word answer or completion of a statement. Supply type items are further classified into very short answer type and completion type. Let us understand both types of supply type items.

- Short Answer (we also call these very short answer type item)
- Completion or fill-in type item.

Very short answer type items and the completion type items are supply type test items that can be answered by a word, phrase, number, or symbol. They are essentially the same, differing only in the method of presenting the problem. The very short answer item uses a direct question, whereas the completion item consists of an incomplete statement.

Examples:**Very short answer type item :**

What is the composition of water?..... (Answer: H_2O)

Completion type items :

The name of the person who invented telephone is _____. (Answer: *Alexander Graham Bell*)

The supply type items are suitable for measuring a wide variety of relatively simple learning outcomes. For Example :

- To measure knowledge of terminology :

Example: Mass movement of rocks, debris or earth down a slope is called (Answer: *landslides*)

- Knowledge of specific facts :

Example: President of India is elected for a term of years. (Answer: *Five*)

- Simple interpretation of data :

Example: In the number 2250, what place value does the 5 represent? (Answer: *50*)

- Ability to solve numerical problem :

Example: The rate of bananas is 60 Rupees per dozen. How many Rupees do you need to buy 3 bananas? (Answer: *15 Rupees*)

- Skill in manipulating mathematical symbols :

Example: If $2x + 5 = 15$
Then $x = ?$ (Answer: *5*)

- Ability to complete and balance chemical equations :

Examples: $Zn + 2HCl \longrightarrow ?$
(Answer: $ZnCl_2 + H_2$)

OR

$Zn + (?) HCl \longrightarrow ZnCl_2 + H_2$ (Answer: *2*)

Supply type items are very commonly used in classroom achievement tests. Linn and Miller (2005) say that they are one of the easiest type of items to construct. It is because of the relatively simple learning outcomes they usually measure. Except for the problem-solving outcomes measured in Mathematics and Science, the supply type items are used almost exclusively to measure the recall of memorized information. But, there are certain points which a teacher should keep in mind while writing supply type items. They are :

- The item must not be ambiguous: (Example: Ambiguous form: Where was Mahatma Gandhi born?) This question may be answered by writing the name of city or district or state or country. To get the exact desired

answer, the question must be written specifically, for example: Better form: In which state, Mahatma Gandhi was born? (*Answer: Gujarat*)

- Do not take statements directly from textbooks to use as a basis for supply type item.
- Blanks for answers should be equal in length.
- A large number of blanks must be avoided in completion type items.
- Clues which give a direct hint to the correct answer must be avoided.

(ii) Selection type items: Another important type of objective items is the selection type of items where the student is required to select the correct answer from among a few given answers. Selection type items are considered as carrying the quality of objectivity. Scoring to such type items are considered easy and objective. Selection type items are further divided into the following :

- (a) Alternative response type items
- (b) Matching type items
- (c) Multiple choice type items

a) Alternative Response Items: The alternative response item consists of a declarative statement that the student is asked to mark true or false, yes or no, right or wrong, fact or opinion, correct or incorrect, agree or disagree or the like. In each case, there are only two possible answers and the student has to select one answer out of the given two alternatives, rather than supplying the answer.

Example: The capital of India is New Delhi. (True/False) (*Answer: True*)

b) Matching Items: In a matching item there are two columns – right and left, and the items on the left column are to be matched with the items on the right column. The left column is called as ‘premises’ and the right column is called as ‘responses’. This can be marked as ‘Column-A’ and ‘Column-B’. In this type of item, it is always suggested that the responses in Column-B are comparatively more than the premises.

Example 1 : In the left – hand column the names of some countries have been given and in the right-hand column the names of some capitals have been given. Match name of the country with its capital:

Column-A

1. India
2. France
3. Pakistan
4. Afghanistan
5. Iraq

Column-B

- a. Islamabad
- b. Baghdad
- c. Kabul
- d. New Delhi
- e. Paris
- f. Colombo

(*Answer: 1-d, 2-e, 3-a, 4-c, 5-b*)

- c) **Multiple Choice Items:** It is the most popular and common form of objective type items and commonly called as multiple choice questions (MCQ). According to Linn and Miller (2005), multiple choice item can effectively measure many of the simple learning outcomes measured by short answer item, true-false item and matching type item. In addition, it can measure a variety of complex outcomes in the knowledge, understanding, and application areas. Multiple choice questions are well known for their extensive use in achievement testing. Apart from using MCQs in schools for knowing achievement of students, they can also be used in various public examinations. Especially for recruiting the candidates for different vacancies and for selecting candidates for admission to various academic programmes through entrance examination. The nature of entrance examination that you have taken for admission to B.Ed. is one of the appropriate example of MCQ test.

A multiple-choice item consists of two parts – problem and suggested solutions. The problem is put either in the form of a direct question or in the form of an incomplete statement and is called **stem** or **premise** of the item. The suggested solutions are called alternatives or choices or options. The student is asked to select the one correct or best alternative after reading the item. The correct response or the best answer is called the keyed answer and the remaining alternatives are known as distractors or foils.

Example: The most accurate measure of central tendency in a distribution is called –

- | | |
|----------|------------------------|
| (A) Mean | (B) Median |
| (C) Mode | (D) Standard Deviation |

(Answer: (A) Mean)

While writing various types of selection type items for an objective type test, one should keep the following points in mind:

In true-false/two alternative response items :

- Double negatives must be avoided.
- The statement must be either entirely true or entirely false.
- The statement must not be complex and indirect.
- The number of true statements and false statements should be approximately equal.
- True statements and false statements should be approximately equal in length.

In matching items :

- Homogeneous content should be used in a single matching exercise.
- An unequal number of responses and premises should be included and the student should be instructed that one, more than one or no response may be used.

- All the items for one matching type item must be placed on the same page.

In multiple choice items :

- An item should contain only one correct or the best answer.
- There should be no verbal association between the item and the correct answer.
- The correct answer should appear in each of the alternative positions equal number of times but in random order.
- The length of the alternatives should be approximately equal.
- Weak distracters must be avoided.
- The stem should not be ambiguous and all the alternatives should be grammatically consistent with the stem of the item.

9.4.2 Essay Type Items

Performance assessment item or essay item is one in which the student answers in his/her own words. These items are most appropriate for measuring higher mental processes which involve the processes of synthesis, analysis, evaluation, organization and criticism of the events of the past. Performance assessment items are sub-divided into different groups on the basis of two parameters that are on the basis of length of answers and on the basis of type of responses.

On the basis of length of answer : On the basis of length of answer, the essay type items can be classified as follows :

- a) Short Answer Essay Items
- b) Long Answer Essay Items

According to Marshall and Hales (1972), a short answer essay item is one in which the examinee supplies the answer in one or two lines and is usually concerned with one central concept. A long answer essay item is one in which the examinee's answer comprises several sentences and is usually concerned with more than one central concept. Usually, short answer essay items are found comprising more than one or two lines and sometime a word limit of 50 or 100 words in which the students write their answers within the given limits. Let us consider the following examples :

Examples :

Short answer type items :

Which are the two main climatic factors responsible for soil formation?

Define soil erosion.

Long answer type items :

As stated earlier, long answer type items measure the higher order abilities of the students. It covers presenting the answer with full details. It includes the skills of analysis, synthesis, application, critical reflection, comprehending

the matter, etc. So far as length of long answer type question is concerned, word limits or time limit may be specified to answer it. Keeping in view the above, on the basis of types of response, long answer type items are classified as follows :

- a) Extended-Response Essay items
- b) Restricted-Response Essay items

This classification is based on the amount of freedom of response the examinee is allowed. In extended-response type items, the students are given almost complete freedom in making their responses, and in restricted-response type items, the nature, length or organization of the response is limited. The extended answer version includes questions which require students to write a brief description, draw a map, make a list, perform a calculation, translate a sentence, write down a definition or formula and so on (IGNOU, 2010). Let us understand both types of items with the help of examples:

Examples :

Extended-response type item :

Explain different types of farming. Which farming do you consider the best in Indian climate and why?

What were the circumstances which led to the eventual collapse of indigo production in West Bengal?

Critically analyse any one novel of Prem Chand.

Restricted-response type item:

Restricted response type items are not open ended. Certain restrictions are given to respond the question, that is in terms of words limit, time, and phrasing the questions with specifying weightage of marks to each phrase of the question. Restricted response type items are very specific in nature. In school and university examinations, restricted response type items are mostly used. Let us discuss a few examples of writing restricted response type of items :

What are the difference between subsistence farming and intensive farming?

Give five ways in which you can save energy at home.

Compare and contrast a weekly market and a shopping complex in view of kind of goods sold, prices of goods, sellers and buyers.

Essay items are used in TMATs like objective items. These items require the students to organize and produce the answer rather than to recognize the answer. The drawback of these items lies in their marking which is highly unreliable. The scoring of both types of essay items varies from evaluator to evaluator and sometimes with the same evaluator when he/she is asked to evaluate the same answer at different time intervals. Therefore, subjectivity in scoring is high in essay type items. Comparatively, scorer reliability is higher in restricted-response type items in comparison to extended response type items. It is because, a clear restriction in terms of word limits, time

given to questions, phrasing the items, etc. are practiced in restricted response type item. According to Singh (1998), one should keep the following points in mind while preparing essay items:

- An essay item must contain explicitly defined problems.
- It must contain such problems whose answers are not very wide.
- Essay items must have clear-cut directions or instructions for the examinees.
- Sufficient time should be allowed in the construction of the essay items.

Check Your Progress 2

Note : a) Write your answer in the space given below.
b) Compare your answer with those given at the end of the unit.

5. Define supply type of objective type test item.

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6. Define selection type of objective type test item.

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7. What precautions should be taken while writing matching type items?

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8. Define restricted response type of essay type items.

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9.5 CONSTRUCTION OF TMAT

In the previous section, you studied about various types of objective and essay type of items. You were also acquainted with different items under objective and essay type of tests. In the present section, we will discuss the processes followed for construction of TMAT. There are five major steps involved in the process of construction of TMAT. They are:

1. Identifying instructional objectives,
2. Making the design,
3. Preparing blueprint,
4. Writing the test items, and
5. Developing marking scheme.

Let us now discuss the above steps in detail.

9.5.1 Identifying Instructional Objectives

The first and the most important step in planning a test is to identify the instructional objectives. Each subject has a different set of instructional objectives. Generally, in the subjects of Science, Social Science, and Mathematics the major objectives are categorized into knowledge, understanding, application and skill, while in Languages the major objectives are categorized into knowledge, understanding, and expression. Knowledge objectives are considered to be the lowest level of learning whereas understanding, application of knowledge are considered higher levels of learning. For detailed understanding of instructional objectives you must read Bloom's Taxonomy of Educational Objectives. For writing instructional objectives, appropriate action verbs should be used. A few examples of action verbs that can be used are : name, list, write, differentiate, compare, contrast, describe, illustrate, define, explain, apply, underline, select, analyse, describe, etc.

9.5.2 Making the Design

The second step in planning a test is to make the 'Design'. The design specifies weightages to different aspects of the test, such as : (a) instructional objectives, (b) types (or forms) of questions, (c) units and sub-units of the course content covered, and (d) levels of difficulty. It also indicates as to whether there are any options in the question paper, and if so, what their nature is.

The design, in fact, is termed as an instrument which reflects major policy decisions of the examining agency, whether it is a Board or a school. A sample format for presenting design of a test is given on the next page (in the sub-section, 9.5.3).

9.5.3 Preparing Blueprint

The third step is to prepare the 'Blueprint'. The policy decisions, as reflected in the design of the question paper, are translated into action through the blueprint. It is the stage where the paper setter decides on how many questions are to be set for different objectives. Further she/he decides under which unit/topic a particular question is to be set. Furthermore, she/he picks up various forms of questions. Thereafter, the paper setter decides how all the questions are to be distributed over different objectives and content areas so as to obtain the weightages decided in the design. The blueprint is basically a two-dimensional chart that consists contents and objectives. Apart from these, form of questions and in terms of marks are also other aspects of blueprint. Once the blueprint is prepared, the paper setter can write/select the items and prepare the question paper. A sample format of Blueprint is given below :

SUBJECT:**CLASS:**

THE WEIGHTAGE OF THE DISTRIBUTION OF MARKS OVER THE DIFFERENT DIMENSIONS OF THE QUESTION PAPER SHALL BE AS FOLLOWS :

1. WEIGHTAGE TO INSTRUCTIONAL OBJECTIVES/LEARNING OUTCOMES

S.No.	OBJECTIVES	MARKS	% AGE OF MARKS
1)	Knowledge		
1)	Understanding		
2)	Application		
3)	Skill		
	TOTAL		100%

2. WEIGHTAGE TO CONTENT/SUBJECT UNITS :

S. No.	UNITS & THEIR SUB-UNITS	MARKS	% AGE OF MARKS
1)			
2)			
3)			
4)			
5)			
	TOTAL		100%

3. WEIGHTAGE TO TYPES/FORMS OF QUESTIONS

S.No.	FORMS OF EACH FORM	MARKS FOR QUESTIONS	TOTAL MARKS
1)	Long Answer		
2)	Short Answer		
3)	Very Short Answer/Objective Type		

- NOTE: THE EXPECTED LENGTH OF THE ANSWERS OF DIFFERENT TYPES OF QUESTIONS WOULD BE AS FOLLOWS:

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This is only an approximation. The actual length, however, may vary. As the total time is calculated on the basis of the number of questions required to be answered and the length of their anticipated answers. It would, therefore, be advisable, to budget time properly by cutting out the superfluous length and be within the expected limits.

S.NO.	TYPE/FORMS OF MARKS QUESTIONS	EXPECTED LENGTH (NO. OF WORDS/ SENTENCES)	EXPECTED TIME FOR EACH QUESTION (MINUTES)
1)	Long Answer		
2)	Short Answer		
3)	Very Short Answer/Objective Type		

(*Note: Internal Options in Long Answer Questions only)

BLUE PRINT

EXAM: *Quarterly/HY/Term End* PAPER :
 SUBJECT :
 UNIT : CLASS :
 MAXIMUM MARKS : TIME :

OBJECTIVES	KNOWLEDGE	UNDER- STANDING	APPLICATION	SKILL	TOTAL
FORMS OF QUESTION/ CONTENT UNIT	LA SA VSA	LA SA VSA	LA SA VSA	LA SA VSA	LA SA VSA
Unit 1					
Unit 2					
Unit 3					
Unit 4					
Unit 5					
SUB TOTAL					
TOTAL					

Note: Please put the number of question within brackets and the marks outside the brackets.

SUMMARY

EASSY OR LONG ANSWER (L.A.) MARKS:
 SHORT ANSWER (S.A.) MARKS:
 VERY SHORT ANSWER (V.S.A.) MARKS:

SCHEME OF OPTIONS:

SCHEME OF SECTIONS:

Delete whichever is Not Applicable

9.5.4 Writing the Test Items

The next step, after the finalization of the blueprint is writing appropriate questions in accordance with the broad parameters set out in the blueprint. You should take one small block of the blueprint at a time and write out the required questions. Thus, for each block of blueprint which is filled in, questions have to be written one by one. Once it is done, we have all the questions meeting the necessary requirements laid down in the blueprint. While selecting each small block for writing a question, you can proceed in several ways, like :

- a) Either writing all questions (one by one) belonging to one objective at a time i.e. knowledge or understanding or application followed by other objectives, or
- b) By taking up questions according to their form or type i.e. Long Answer or Essay Type followed by Short Answer and Very Short Answer Type or in any other order, or
- c) By writing questions for one unit of the syllabus or portion to be covered by the test at a time.

Each approach has its advantages and disadvantages, too. Irrespective of the method followed, the questions then have to be arranged in a logical sequence.

9.5.5 Marking Scheme

The fifth step is to prepare the 'Marking Scheme'. The marking scheme helps in preventing inconsistency in judgement. In the marking scheme, possible responses to items in the test are structured. The various value points for response are graded and the marks allowed to each value point indicated. The marking scheme ensures objectivity in judgement and eliminates differences in score which may be due to subjectivity of the evaluator. The marking scheme, of course, includes the scoring key, which is prepared in respect of objective type questions.

The above process is followed to prepare TMAT manually. With the availability of internet, test can also be prepared by using various online evaluation tools. (Refer Unit-8, Block-2 of this Course) Even in various objective examinations, test is conducted manually but scoring is done computerised. For this, the optical mark recognition (OMR) sheets are used for scoring purpose. The OMR sheet is provided to the examinees with the question paper. The examinees respond to the question in the OMR sheet. But for the simple class test, manual scoring method is used because it covers mostly all type of question papers such as : objective, short answer and essay type questions.

Check Your Progress 3

- Note :** a) Write your answers in the space given below.
b) Compare your answers with those given at the end of the unit.

9. What are the major steps involved in construction of TMAT?

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10. Define a blue-print.

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9.6 ADMINISTRATION OF TMAT

Having prepared a good test, you should plan to administer it in such a way that each of your students will do their best.

Motivating students is very important, and this is an area in which each teacher will have her/his own special technique. If you can get your students to see this test as an interesting and challenging task, which will benefit them, they will surely do well. Let them understand the advantages of the class test. Make them understand that such tests help them to get a feedback on their weaknesses and the concept that they have not understood; which can be corrected before they face external examinations. Experience has shown that students who are given frequent class tests and are subjected to continuous assessment do better in external examinations.

Some of the values of designing a good test and preparing students well for the test may be lost if you do not plan in advance for its administration. Detailed planning is necessary as any confusion in the administration of a test may disturb the examinee and lower the validity of the results. Some tips to be kept in mind while planning for the administration of a test are given below:

a) Time Schedule

Be sure that time schedule is planned carefully, ensuring teacher and pupil readiness. Much preparation may be done a day before. It will be wise to schedule enough time for briefing the invigilators.

If there is a deadline for finishing the test and leaving the room (e.g., the end of a class period), be sure to plan for adequate time at the end for the things which must be done. Even with a small class these take five to ten minutes, and with a large group they may take little more time. A hasty wind-up may result in non-fulfilment of the objectives of the test.

b) The Room

It is important for any examination to provide a quiet, comfortable atmosphere, in which the students are encouraged to do their best. As much as possible, try to test in a quiet place with a minimum of distracting noises. Avoid rooms near cafeterias, common rooms, playing fields or other noisy places. Request nearby loudspeaker owners to shut them off for the duration of the examination hours. Hang signs on the door, saying "EXAMINATION IN PROGRESS: DO NOT DISTURB". Objective examinations generally require more intense concentration than essay type exams. The latter demand an excess of physical endurance (trying to write fast enough to keep up with one's thoughts). Objective tests require constant, careful and critical thinking and reasoning, with a minimum of physical work.

c) Desks, etc.

Remember that the students will be writing on a single – thick answer sheet, not a thick answer book. Be sure the writing surfaces are at least 30 X 80 cm. and as smooth as possible. If there are cracks or scratches, then a student's pencil may push through the answer sheet, spoiling it and making it hard to mark. Also be sure the room is clear of any charts, posters, etc. that might help some candidates.

d) Equipment

It is wise to make up a check-list, ahead of time, of what you will have to take with you to the examination hall. Be sure to include chalk to write necessary notices on the black board. If there is no black board; then make placards or poster ahead of time. For exact timing of the test (much more important for objective tests), it is better to have two watches or clocks.

e) Invigilators

For anything more than an informal, half-period quiz, you will probably need the help of one or more invigilators. Choose persons who are willing to give their full attention to the task. Neither you nor your invigilators should talk, read, correct papers or do any other work during the examination time. They should observe closely, circulating constantly, checking that the students are answering in the right place, not copying, etc. However, they should not hover too long over any student, as this makes the examinee nervous.

9.7 SCORING AND RECORDING OF TEST RESULTS

Despite the objectivity of scoring short answer tests, certain procedures are indispensable if scoring is to be done with maximum accuracy and efficiency. The necessity for extreme care in scoring has been indicated by several studies showing that scoring errors occur with appalling frequency. "Constant" errors can be due to failure to understand scoring directions, with resultant scores which are consistently too low or too high. "Variable" errors can be due to carelessness in marking, adding, computing, or transcribing scores. These errors warrant (i) the careful training and instruction of scorers, and (ii) the rescoring of at least a sample of any group of test booklets or answer sheets.

9.7.1 Order of Scoring

With essay tests it may be desirable to have one person score all answers to the first question, then to the second, and so on. If, for objective tests separate answer sheets are provided, the scorer may score a given page in all booklets first, then the next page, and so on, rather than scoring all of one booklet before going on to the next. If so many booklets are to be scored that several scorers are needed, each person may specialize on a given page or group of pages of the booklet but should score only one page in all booklets at a time.

9.7.2 Rescoring

With a large number of booklets to be scored and sufficient help available, it is always worthwhile to re-score them so as to eliminate errors that otherwise are almost inevitable in a clerical task like this. If complete rescoring is not feasible, then every fifth or tenth booklet should be rescored to get a rough idea of the frequency and magnitude of scoring errors. Rescoring a sample sometimes uncovers such an inaccuracy as to make it desirable to re-score the remainder.

9.7.3 Keeping Records

As soon as possible after the tests have been administered, the answer sheet should be checked and scored, and the scores should be recorded on the permanent records of the school. Each teacher should be given copies of the score reports for the pupils in his/her classes. Usually schools have some type of permanent record for each pupil which provides space for recording test results.

The form in which test results are recorded is often meaningless to anyone except the persons recording them. Sometimes permanent records for a pupil contain such information as the following

IQ	104	Mathematics	97
Reading	68	Science	93

What do these scores mean? What test of intelligence was used? What was its standard deviation? Are the Reading, Mathematics and Science scores the raw scores, percentile ranks, or some other type of standard or derived score? Unless the cumulative record contains complete information about the test and the type of score, the effort involved in carrying on a testing program, scoring the tests, and reporting the scores is practically wasted. If the records are to have value, the following must be indicated: test title, form of the test, date when the test was given, the raw score or standard score, and percentile rank under properly identified captions. When percentile ranks are reported, the group on which the norms were based should be identified – for example, national, state, district, local, or other group – and the nature of the group should be specified.

9.8 REPORTING AND INTERPRETATION OF TEST SCORES

After administering and scoring of a test, next step is reporting and interpretation of the scores.

Linn and Miller (2005) say that the evidence of learning and development must be presented on a very brief report form that is understandable to a variety of users (e.g., students, parents, teachers, counselors, and administrators).

In most of the cases, the school policies guide a teacher in reporting the test scores. School grading and reporting systems are designed to serve a variety of functions, like instructional use, report to parents, and administrative and guidance uses.

The focus of the grading and reporting system should be towards the improvement of student learning and development. This is most likely to occur when a report (a) clarifies the instructional objectives, (b) indicates student's strengths and weaknesses in learning, (c) provides information concerning the student's personal-social development, and (d) contributes to the student's motivation. These functions require a much more comprehensive report than the single letter grade.

Informing parents of their children's school progress is a basic function of a grading and reporting system. These reports should help parents understand the objectives of the school and how well their children are achieving the intended learning outcomes of the particular programme.

For administrative purposes, the grades and progress reports are used for determining promotion, awarding honors, deciding scholarship/study grant, determining athletic eligibility, and reporting to other schools and prospective employers.

Interpreting the Results

When interpreting the performance of individual pupils or of a class as a whole, the teacher should take into special consideration on differences in the cultural background of families and communities. There are wide variations in the kind of experiences pupils have. We can expect the differences in language background, richness of home resources, and intensity of the desire for an education which reflected in pupil performance.

Performance of pupils also varies with varying emphasis on different aspects of the school curriculum. In some subject matter areas, such as Arithmetic, the teacher usually cannot expect her/his pupils to go much beyond instructional materials. In other areas such as reading, there are many opportunities for students to develop skill and knowledge on their own outside the school programme. Thus the performance of individuals and groups should be judged, in part at least, on the basis of the curriculum to which they have been exposed. When the performance of a class or an individual deviates considerably from the norms on standardized tests, a need for reappraisal of the school curriculum and of teaching emphases may be indicated.

A final precaution is to avoid using tests to punish pupils or to foster a spirit of rivalry among teachers or schools. Teachers and administrators must keep the welfare of pupils uppermost in their minds and be sensitive to the requirements of adequate human relations. Failure to do this in administering and interpreting a testing program will produce negative feelings about tests in both pupils and teachers.

Check Your Progress 4

- Note :** a) Write your answers in the space given below.
b) Compare your answers with those given at the end of the unit.

11. What major points need to be kept in mind for proper administration of a TMAT?

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.....
.....

12. Define variable errors in scoring the items.

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.....

9.9 LET US SUM UP

In this Unit, you studied the concepts and procedures of preparing TMAT. TMATs are invariably used by all teachers in all stages of school education. In the beginning we discussed about the concept and purpose of TMAT. Then, we discussed various types of items/questions which are used in an achievement test. You were also acquainted with writing various types of objective and essay type items. Further you acquainted with construction of a TMAT by preparing a design of a test and accordingly preparing a blueprint. We then discussed the administration of TMAT, and their scoring, recording of results, reporting and interpretation of scores. This Unit will further help you to understand Unit-10 of this Block.

9.10 REFERENCES AND SUGGESTED READINGS

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(Note : Partial content in section 9.5, 9.6 and 9.7 of this Unit has been taken from Unit-8 'Achievement Test' of Block-2, ES-333, B.Ed., IGNOU, 2010)

9.11 ANSWERS TO CHECK YOUR PROGRESS

1. Teacher made achievement tests are constructed by the teacher to assess the learning progress of the students and also to diagnose the learning difficulties of the students.
2. Half-yearly and annual examination question papers.
3. Standardized tests are subjected to follow the procedure of standardization i.e. item analysis, establishing reliability and validity, etc. whereas, teacher made achievement tests are prepared and used by a teacher to evaluate what the students have learned in her/his class.
4. Feedbacks received by using TMAT from the students are also equally help the teachers to review their teaching strategies and modify their teaching.
5. In supply type of items, items are not given options of answers. Students have to recall the answer. Answers in a supply type of items are either in one word, number, term, etc.
6. In selection type of items, options of answers are given with the question. Students have to select the correct answer among the options given. Alternate response type item, multiple response type items, matching type of items are the examples of selection type items.
7. In matching-type of items, the number of responses should be more than the number of premises.
8. In restricted response type of essay item, certain limitations are given to write the answer. The limitations may be in words, sentences, time, and the items are also carefully phrased. Weightage to each phrase of the question is also given.
9. The major steps for constructing TMAT are : identifying instructional objectives, making the design, preparing blueprint, writing the test items, and developing marking scheme.
10. Blue-print is a two-dimensional chart in which weightage are given to objectives, contents, and also to form of questions in terms of marks.
11. Provide proper instruction, proper scoring, verify it by rescoring, recording and reporting results.
12. Variable errors are a type of error which occurs due to carelessness in marking, adding, computing, or transcribing scores during scoring.