DIPLOMA IN ELEMENTARY EDUCATION (D.El.Ed.)

Pedagogic Processes in Elementary Schools

Block -4
Learning Assessment

NATIONAL INSTITUTE OF OPEN SCHOOLING
A - 24/25, Institutional Area, Sector – 62,NOIDA
Gautam Buddha Nagar, UP – 201309
Website: www.nios.ac.in

Credit Points (8=6+2)

Block	Unit	Name of Unit	Theory Study Hours		Practical Study
			Content	Activity	
Block-1: Learning and Teaching Process	**U1**	Learning and Teaching during Early Schooling	6	4	Identification of the role of a teacher as facilitator from your own experience
	U2	Approaches to Learning and Teaching	8	5	Identification of the characteristics of child centred approach from the behvaiour of your colleagues
	U3	Methods of Learning and Teaching	7	4	Differentiation amidst different methods (as mentioned) in the kdf of learning and teaching
	U4	Learning and Learner Centred Approaches and Methods	9	7	Seminar on classroom managerial problems in using different approaches mentioned in the unit
Block-2: Management of Learning-Teaching Process	**U5**	Management of Classroom Processes	6	3	Identification of material and demotivating actions taken in the classroom by teacher-colleagues
	U6	Teaching and Learning Materials	7	3	Separation of TLM in various concepts from different subject areas
	U7	Management of Multi-Grade and Multi-Level Situations	8	5	Development of activities in different subject areas in multigrade classes
	U8	Planning Learning Activities	5	3	Development of Anmial calendar of scholastic & co-scholastic activities, lesson class & lesson note
Block 3: Emerging Issues in Classroom Learning	**U9**	Integrated Learning-Teaching Process	5	2	Development of activities integrating concepts from different subject areas.
	U10	Contextualizing Learning Processes and Materials	5	2	Collection of folk-materials and its use in teaching-learning process

	U11	ICT in Learning	6	3	Development of ICT tools for transacting lessons
	U12	Computer-assisted Learning	6	3	Computerised analysis of learners' achievement in different subjects
Block-4: Learning Assessment	**U13**	Basics of Assessment and Evaluation	7	3	Conducting CCE in any one of the subject area
	U14	Tools and Strategies of Assessment	8	5	
	U15	Using the results of assessment for improving learning	7	3	Development unit test in different subject areas
	U16	Learning and Assessment	7	3	Analysis of question paper on different subject areas Study of different ways of sharing result of student performance with various stakeholders
		Tutoring	15		
		Total	122	58	60
Grand Total			**122+58+60=240 hrs.**		

Block 4

Learning Assessment

Block Unit

BLOCK INTRODUCTION

Block Introduction-4

You as a learner will study block 4 : Learning Assessment. This block consists four units related to learning assessment. Every unit is divided into sections and sub sections. You have already studied about learning and teaching process and its various aspects, in block 1 and in block 2 about management of teaching and learning process. In block 3, a detailed study about emerging issues is classroom learning has been acquired like concept of integrated learning, education of disadvantaged groups, role of ICT and computer in learning.

Unit-13 : In this unit you will be acquinted with different concepts associated with the processes of assessment of learning. Assessment may be a new concept but there is acquaintance with the words like evaluation, measurement, examination. The unit tests, half yearly and annual examination are used to measure the performance of students but this process lack comprehensiveness. So there is a need of Continous and Comprehensive Evaluation (CCE) and use of quantitative and qualitative data for CCE.

Unit-14 : This unit will make you enable to acquire the skill of construction and use of achievement test. There is imparting of skill of construction of different types of test items for example extended response type items, restricted response type items, objective type items and open-ended items. Different qualitative tools and techniques are used for assessing the student's level of performance like observation, checklist rating scale, portfolio, unterview etc.

Unit-15 : This unit will empower you to understand the need and process of recording and reporting of assessment results. The analyzing of Assessment results ehlps to identify strength & weakness of learner. This will enable to know how to plan follow up programmes based on analysis of assessment records for enhancing student's learning.

Unit-16 : You will be acknowledged to the relationship between learning and assessment. There are three aspects related to learning and assessment i.e. assessment of learning, Assessment for learning and assessment as learning. This will develop the skill of designing assessment plan.

CONTENTS

UNIT 13 BASICS OF ASSESSMENT AND EVALUATION

STRUCTURE

13.0 INTRODUCTION

In the previous blocks, you have been acquainted with the process of learning, planning lessons with different methods and approaches of teaching for facilitating students' learning. Ms.Sheila, a promising teacher like you, chose appropriate methods, planned her lessons meticulously and managed her classroom transactions so well that all her students participated in all the classroom activities she conducted while teaching. After the completion of teaching a topic, what should Ms.Sheila do? Would she proceed on to teach the next topic, or would she ensure that every student has understood the concepts she had taught and is capable of using the concepts in solving problems including those in real life situations? How could she ensure that she was in the right direction while teaching? Did the students face any learning difficulties? Several such questions relating to the efficacy of teaching and learning gains would arise. Sheila needed

to know the answer to these questions and take necessary steps before proceeding to the next topic/lesson. But, how can she collect data in response to these questions? She can ask questions to the students to test their understanding, observe their activities in and out of the classroom as to how the students are using their acquired knowledge in real life situation, ask other teachers and parents regarding their performance etc. She can use other means to gather a complete picture of the status of each and every student with respect to his/her learning of the concepts taught. In brief, she can assess or evaluate the performance of each student.

Ms.Sheila can assess one or a few aspects of students' learning which she considers important to take further action or she can assess all possible aspects of students' learning (comprehensive assessment/evaluation) and prepare a report stating all the aspects of each student as obtained from the assessment exercises so that anybody like parents, head teacher, school committee members or Inspectors can have a complete idea of the students' performance.

At present, you might have observed that unit tests, half-yearly and annual examinations are conducted at the school level to know/assess the learning progress of the students in different school subjects and the performance of the students is measured in terms of marks / grades. This process lacks comprehensiveness as there is little scope to assess the all-round development of the students. However, as emphasized in the NPE (1986) and NCF (2005), more focus needs to be given on continuous and comprehensive evaluation (CCE). In this unit, you will come to know the different concepts associated with the process of assessment of learning and how it can be made continuous as well as comprehensive for improving learning and modifying the teachers' strategies so as to facilitate students' learning. For completion of this unityou will need at least 10(ten*) study hours*.

13.1 LEARNING OBJECTIVES

After completing this unit you will be able to:

● Explain the concept of measurement, assessment and evaluation.

● Identify the similarities and differences among measurement, assessment and evaluation;

● Relate assessment with expected learning outcomes and the processes of classroom transaction;

● Use both formative and summative assessment procedures for facilitating students' learning;

● Explain the meaning, need and procedure of Continuous and Comprehensive Evaluation (CCE);

- Make use of both quantitative and qualitative data generated through CCE.

- Employ the outcomes of the continuous and comprehensive evaluation/ assessment (CCE) to improve your teaching strategies.

Notes

13.2 ASSESSMENT OF STUDENT'S PROGRESS

It is quite natural that, each individual student has some potential abilities or skills which need to be nurtured carefully. As a teacher, you have the responsibility to help each and every student perform to the best of her/his ability. In the teaching-learning process, it is important to know, if the children have learnt what they are supposed to learn, and to find out if their learning progress is satisfactory over time. However, there is another reason. It is not only a teacher, but also the parents and educational administrators who are interestedto find out what the students have achieved in different subjects and co-curricular areas. One of the ways for this is to evaluate theachievementof the students through tests and examinations on the subjects being taught to them and score or rate their performance in terms of marks/grades.As a teacher you are quite familiar with this. However, if you really want to help the students learn better, you need to consider what do the marks or grades obtained by the students through tests / examinations actually tell about their learning progress. While thinking about the marks and gradesseveral questions may come to your mind, such as:

- Do the marks or grades obtained in different subjects represent the actual performance of the student?

- Do they tell anything about the learning style or the way of learning of the individual student?

- Do they indicate anything about the difficulties a student is facing during learning?

- Do they provide information on the areas of strength and weakness of the student in learning?

- Do they tell anything about the extent and pace of learning?

- Can all the aspects/areas of learning in all subject contents and co-scholastic competencies be scored or graded?

- Is there any alternative or/ and supplementary mechanism to assess learning in a better way?

If you try to find out the answers to the above questions, possibly, you will realize the limitations of the marks and grades with which we all are very familiar. There are several other ways to ascertain the nature of student's learning. To understand those methods, you need to have clear understanding of the concepts of Measurement, Evaluation and Assessment.

Notes

13.2.1 Measurement, Assessment and Evaluation

Measurement: In your day to day life as well as in the classroom situation, you are quite familiar with measurement. Normally you ask questions like; *'how old is Sambit?', 'how tall is Seema?', 'How much does Rahim weigh?', 'what is the area of the classroom?', 'how much does your pen cost?', 'what is the temperature today in your area?'* etc. In the above questions all that you want to know are about age, height, weight, area, price and degree expressed in some quantity. For example *'Sambit's age is 15 years', 'Seema is 1.8 meters in height', 'Rahim's weight is 35 kilogram'*. What exactly does '35 kilogram' mean?

There are two aspects to be remembered when we measure any physical thing (say weight of Rahim): *a number* (35) and *a unit of measure* of weight (kilogram). Can we express the weight with either one of the two? No we cannot——— statements like 'weight is 35' or 'weight is kilogram' do not convey any meaning. In simple terms *measuring any aspect is to state the particular attribute* (age, weight, height, length, time) *in terms of quantity and quantity is expressed through the number of unit of measurement* (like year for age, gram or kilogram for weight, meter for height or length, hours/minutes/second for time etc.). In other words, *measurement* relates to *the description* of any particular aspect or characteristic of an object or process in terms of certain amount or *quantity*. Measurement of any aspect of an object or phenomenon is its *quantitative description*.

🛠 ACTIVITY 1:

List out the names of as many objects or items as you can. Specify the possible measuring device(s) and the unit(s) of measurement against each object or item. One example has been given for you.

Sl. No.	Name of the object/item	Possible measuring device(s)	Unit(s) of measurement
1	*Weight of Rice*	*Weighing machine*	*Kilogram*

Generally, some standard instrument or scale is used to measure the extent of any aspect of an object. When you measure the length of the classroom, you need a meter scale and express the result as, say 4 meters. The length of one meter is a fixed quantity of length which is same throughout the world — it is a standard

scale (or unit) for measuring length. In this process, you are simply collecting information by comparing the attribute (e.g. the length of the room) with a standard scale or a unit (i.e. a standard meter scale).

Comparisons can be made in terms of gain (or loss) or progress made over a period of time. Increase in height, or loss in weight in two years, gain in speed of a car in two hours are instances of such comparison which also require measurement on subsequent occasions. In the measurement of physical aspects, the comparisons can be expressed in ratio of two numbers (number of times or number of parts). When we measure to compare same aspect of two similar objects, the results of the measures of the same attribute can be expressed in term of multiples or factors for e.g., a length of 12 meters is twice of a length of 6 meters or in reverse, the length of 6 meters is half of 12 meters.

All the examples described above relate to the measurement of physical objects or processes which can be seen, touched or felt and can be easily quantified. But how can we quantify human characteristics like cleanliness, smartness, aptitude, honesty, etc.? Many methods have been developed to measure and quantify several human qualities.

As a teacher or as a parent, wealwayswant to know the extent of experience (knowledge, understanding etc.) our child has acquired while studying in a class in a school within a period of say, last six months. In other words we want to find out the gain in learning which is termed as *learning achievement* or simply *achievement*.How can the gains from learning over a period of time be quantified?

To measure the learning achievement of studentsstudying in a school, we, as teachers, usually make them to answer questions asked orally or in written form. A question paper in a subject area of examination for each class developed systematically during monthly or half-yearly or annual examination iscalled a *test*. A test developed to measure extent of achievement is called an *achievement test*. By scoring the answers given by a student or giving appropriate marks to each question responded and then totalling these marks we get the total score a student has obtained in the examination of a particular subject which gives a measure of achievement of the student.

For example, suppose Jaba, a student in class VII, secured 40 out of 100 on a test in Science during the half-yearly examination. Her achievement (what is learnt) has been quantified to be 40 in a scale of 100. In other words, if we consider that there are 100 points of learning included in the test measuring all the concepts in Science taught during the year, Jaba has answered 40 pointscorrectly. If in the annual examination she secures 80 in the same subject, then we can say that she has improved her achievement in Science

Before proceeding further, answer the following question:

Notes

E1. If Suman takes an achievement test on Percentage and obtains 15 out of 25 marks and then repeats the same test after a month, would she likely to secure more marks? Why?

We can thus say that measurement in education, like the measurement of physical objects, is the process of expressing the desired aspect in quantitative terms. But, unlike the comparisons in physical measurements, comparison of marks cannot be done in terms of ratios. In the above example, we cannot say that Jaba's achievement in Science in the annual examination is twice that of the half yearly examination. Similarly, if two students, Jiban and Zinat of class V obtain 50 and 75 marks respectively in Mathematics in the same examination, it would be wrong to say that Jiban's achievement is two third of Zinat's achievement in the subject. All that we can say is that Zinat's performance/achievement in Mathematics is better than that of Jiban.

Further when a student secures the minimum mark 0 or the maximum mark 100 in a subject, we cannot assume that the student knows nothing (in case of securing 0) or knows everything (when securing 100) in the subject concerned. We can only infer that on the first occasion, the performance is 'poor' or on the second occasion, it is 'extremely good'. Based on the marks, we make qualitative remarks on the students' performance like 'poor', 'average', 'good' etc. which may not be always correct. If a student secures a score of 75 in Language in class VII, this score does not tell anything whether he/she likes to read books other than textbooks, gives better response in language classes, takes active parts in language activities, and such other characteristics of the student. Such characteristics which are also the indicators of learning can only be stated through statements and not through numbers. Considering the example of Jaba's achievement in Science, answer the following.

E2. In addition to the marks obtained by Jaba in Science, specify any three indicators of learning for assessing her progress in Science.

Assessment: When you go to buy a dress for yourselfwhat do you normally do? You examine several pieces of dress and compare those from different angles such as; the size, colour, brand, price, durability and suitability for your requirements. You select the one that fits your requirements. Similarly, if you really want to measure the performance of a child in a particular school subject, say in Environmental Studies at the end of a specific unit or at the end of the course, you may administer a test and measure the performance in terms of marks, or/and give him/her an assignment or project, observe his/her activities in and out of the classroom relating to his/her understanding and application of the concepts of EVS. Assessment of learning or performance in EVS, thus, refers to the collection of all possible data and evidences with respect to learning of EVS concepts. These data may be numerical or quantitative like marks or scores and

qualitative data like interest in learning of the concepts, interaction capability on the concepts learnt, involvement in subject-related activities and several other characteristics of the student which are the possible outcomes of learning of the concepts. You can very well see that assessment goes beyond measurement which is limited to collection of numerical data. Besides including the numerical scores, assessment is based on data related to qualitative aspects of learning. The information or data for assessment of learning can be gathered from various sources using various tools and procedures like achievement tests, participation of students in classroom and other activities, his/her performance on project work and other assignments and such other various situations where the student can show his/her learning performance. It should be kept in mind that data using a single test or from a single source cannot help in assessing the learning completely and this will be discussed in details in Section 13.5 of this unit.

An assessment of learning is always done with a definite purpose or purposes. Although in school education, all assessment aim ultimately at improving students' learning, but each and every assessment is done to address specific issues of learning that a teacher faces while teaching in the classroom like, *'Recurring spelling mistakes in Mother Tongue at Class V level', 'Mistakes committed while carrying over is involved in addition of two three-digit numbers', 'Faulty reading style', 'Incorrect observations of parts of different types of flowers'*. To know the exact status of the specific learning issue, the teacher tries to assess the students with specific tools.

Thus it can be said that assessment refers to the process of collection of quantitative and qualitative information on specific issues based on which steps can be taken for facilitating/ enhancing learning.

Evaluation: All of us judge and take decisions over a number of issues in our life. Let us take a simple example of buying soap for bathing. From among the several brands of bathing soap available in the market, you have to select one that suits you best. You probably ask several questions like, *'Is it quite soft for use?', 'Does it produce sufficient foam to wipe out dirt from the skin?', 'Does it produce any reaction on the skin?'; 'Is the smell pleasant?'; 'Is the price affordable for me?'* and so on. After getting all information to the queries, you finally judge regarding its suitability for you. You may say, *'It is suitable for me in all respects.'; 'It smells well'; 'I cannot afford it'* and the like. You are making judgement about the soap from the point of view of utility. You are making this judgement based on the information gathered on the producti.e. you are engaged in evaluating the soap you are going to purchase.

Similarly, when you are going to evaluate the learning progress of a child, all dimensions related to learning of the child need to be taken into account. All possible information regarding the learning of the child, both quantitative and qualitative are to be properly collected and carefully analysed before making any judgement on his/her learning status/progress

Notes

Notes

From the above discussion, the concept of evaluation may be presented in brief as shown in the Box 13.1.

Quantitative Information and /or   Qualitative Information +Value Judgement = Evaluation

(Collected through tests)   *(Collected though observation,*
                                     analysis of behaviour, portfolio,
                                     Project work etc.)

Box 13.1 Concept of Evaluation

Now considering classroom learning, in what way are assessment and evaluation similar and different?

- Assessment refers to the collection of data and the gathering of evidence from different sources through different tools, whereas evaluation refers to bringing meaning to the collected data through interpretation, analysis and reflection.

- Assessmentprovides feedback on performance of the student specifying his/ her strengths and areas for improvement which provides insights for taking appropriate steps for improving the learning. Evaluation, based on the collected evidences, determines the standard met and the levels of success or failure in meeting these standards.

- In both the processes instructional decisions are carefully made by examining evidence of student performance, behaviours toward learning and understanding over a period of time. For this reason, very often both the terms are used synonymously. In this text also we have used the two terms interchangeably focusing more on monitoring and facilitating children's learning.

From the above discussion we can summarise the concepts of measurement, assessment and evaluation, as shown in the Box 13.2.

Measurementrefers to the process by which the attributes or dimensions of some object or phenomena are quantified.

Assessmentis a process by which information is obtained relative to some known objective or goal.

Evaluation refers to the value judgement made on the phenomenon, taking into consideration the quantitative and/or the qualitative information collected on it over a particular period of time.

Notes

Box13.2: Operational meaning of Measurement, Assessment and Evaluation

In order to strengthen your own understanding about these concepts do the following activity.

ACTIVITY 2:

Prepare a list of information that you would collect for the assessment of progress in learning of EVS at class V.

13.3 THE PROCESS OF ASSESSMENT

Learning is a purposeful activity. Therefore, any subject included in the school curriculum has specified learning objectives. It is expected that after studying each subject, a student shall demonstrate the competencies/behaviours specified. In this context assessment becomes an integral part of instruction, as it determines whether or not the goals of education are being met. Assessment affects decisions about grades, placement, advancement, instructional needs, and curriculum.Assessment inspires us to ask these hard questions: "Are we teaching what we think we are teaching?" "Are students learning what they are supposed to be learning?" "Is there a way to teach the subject better, thereby promoting better learning?"

Searching for the answer to these questions would lead you to see a relationship between learning objectives, classroom processes and assessment.Let us find out.

13.3.1 Expected Learning Outcomes, Classroom Processes and Assessment

The process of classroom transaction is usually based on certain curricular areas. These curricular areas, specifically the subjects have some content areas. Each unit/content has certain learning objectives to be achieved. That means after studying the concepts included in the topic/subject, the student shall perform or demonstrate in the expected manner as stated in the objectives. Hence, learning objectives are also called '*Expected Learning Outcomes*'. How can you ensure that these learning objectives are achieved at the end of the unit/course? For this you need to assess the achievement of these expected learning outcomes. To make the task of assessment easy and more accurate, the expected learning outcomes need to be '*specific*', '*measurable*', '*achievable*', '*realistic*' and '*time-bound*' (SMART). For example, we may specify an objective of teaching Geography as follows.

On completion of the topic, the students of Class V will be able to identify important places like Delhi, Mumbai, Chennai and Kolkata in the map of India.

The objective set here is specific because it specifies what the students will be doing and when they will be doing? This is also measurable through a learning task. This is also within the capacity range of the students and hence achievable. This is realistic in the sense that students can show the places in the map and time bound in the sense that they need to do it after completing the topic.

The examples of such expected learning outcomes may be the competencies to be achieved under different curricular areas at different classes. Let's look at the text book on Mathematics for Class – V students and find out the expected learning outcomes for each unit/topic. Some examples have been given in Table 13.1.

Table 13.1: Exemplars of Expected Learning Outcomes in Class- V Mathematics

Topic	Expected Learning Outcomes
Fraction	*Reduces simple fractions to lowest terms.*
Percentage	*Finds required percentage of a given number or measure.*

On the basis of the learning objectives, the teaching-learning materials and the activities are designed, and accordingly classroom transactions are organized. After the classroom transactions are over, the extent to which the expected learning outcomes have been achieved by the students is assessed. Thus, the entire classroom process has the following three major components/stages as shown in Fig. 13.1:

(i)   deciding the expected learning outcomes,

(ii) planning and conducting classroom transaction, and

(iii) assessment of students' progress in learning.
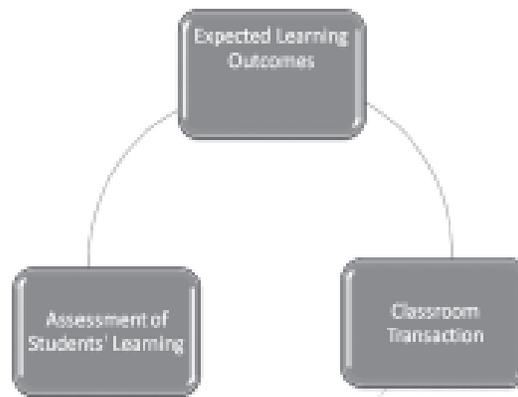
Fig. 13.1: The Classroom Process

Although the three components of the classroom process, appears to be logical and natural, in reality the classroom process does not proceed in such a simple and linear fashion. Sometimes, in spite of planning and teaching guided by the learning objectives, you may experience difficulty in fulfilling one of the objectives which you strongly find to be difficult to achieve considering the poor level of the particular group of students. In such a situation, you need to modify the learning objectives. Similarly, assessment of the students' achievement at the end of the classroom transaction of the topic may reveal not only some unexpected weaknesses in the classroom transaction, but also about the expected learning outcomes which might require some modification. Thus each of the three components of the classroom process influence and in turn gets influenced by the other two. Therefore, note in Fig. 13.1 the arrows indicating the direction of influence are not unidirectional.

We can say that the result of assessment of learning outcomes tries to answer the following questions:

ACTIVITY 3:

Select a unit/topic from any subject of your interest at the elementary level. Go through it thoroughly, and then fill up the following format which requires you to

- *Formulate the expected learning outcomes for the unit/topic,*

- *Propose processes/methods to be used for classroom transaction,*

- *Suggest at what time assessment can be conducted(during the transaction of the unit/topic, or at the end of the unit/topic, at the end of the year), and*

- *Suggest possible tools and techniques for assessment (from your teaching experience.).*

Class: _____,Subject: _____,

Name of the Unit/Topic: _____

Expected learning outcomes	Processes/methods to be used for classroom transaction	When to conduct assessment	Possible tools and techniques for assessment (Oral/ Written/ Practical/ Observational)

Notes

What are the extent and pace of students' learning?

- Are all the stated learning outcomes appropriate for the students?

- Which of the aspects of the classroom transaction need further improvement?

- What are the areas of strengths and weaknesses of the students that require further care?

- How do you evaluate and improve the effectiveness of your efforts to assess and improve student learning?

You might be thinking that assessment/evaluation is either at the end of a unit/ a topic or at the end of the academic session. On the contrary it can be conducted at any time during the school session whenever the teacher feels to check whether his /her strategy of teaching-learning activities in the classroom is efficiently working to facilitate students' learning. Performthefollowing activity to understand the relationship among processes of stating expected learning outcomes, classroom transaction and assessment of learning outcomes.

13.3.2 Formative and Summative Assessment

Assessment can be of different types depending on their purposes. It can be:

- *formal* (like annual or unit tests) or *informal* (like teacher's casual dialogue with students in the classroom interaction or informal observations of students' activities);

- *objective* (centring on definite pre-fixed outcomes) or *subjective* (focusing more on individual variations, needs and achievements);

- *norm-referenced* (comparing student's performance against a group norm or standard) or *criterion-referenced* (comparing student's acquired performance with the desired performance).

As mentioned earlier assessment of learning is an integral part of the learning process. It can be divided into *formative* and summative categories.Let us understand these two categories.

- **Formative Assessment**

Formative assessment is 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. It is an on-going process usually carried out by the teacher to continuously monitor student's progress in a non-threatening and supportive environment. It typically involves qualitative feedback (rather than scores) for both student and teacher that focusses on the details of content and performance and such assessment can also involve the student himself/herself (self-assessment) or the peer group (peer appraisal).

The *formative assessment helps a teacher*:

- To *provide feedback* (knowledge of the results of assessment) to students, their parents and to other teachers, so that you can motivate them to move in right direction facilitating or supporting the learning process.

- To *modify subsequent teaching- learning activities and experiences*. If you observe through the feedbacks of the assessment, that majority of the students in your class are performing below the expected level; you can redesign the teaching-learning strategy and methods to suit to the observed needs of the students.

- To *identify and remediate group or individual deficiencies*. For example, if you find that some students do not understand a concept which you taught them, you can give extra coaching or can take any other timely action to improve their performance. You can identify weak areas to take some remedial actions. You can also design some support materials for the students falling behind.

- To *recognize the potentials of the students* and facilitate for enriching their capabilities. The feedback from the formative assessment may reveal the areas of strength, creative potentials of several students. As teacher, you get opportunity to nurture their qualities by providing enrichment experiences.

The feedback from *formative assessment helps the student*:

- To *monitor his/her own progress of learning* and help in promoting self-learning.

- To move his/her focus away *from achieving grades and onto learning processes*, in order to   increase self-efficacy.

- To *improve their*http://en.wikipedia.org/wiki/Metacognition*awareness of how they learn*. In most cases studentsare so dependent on others to be constantly guided to learn that they become rarely aware of their own strength in learning. But feedbacks received on regular basis from the formative assessments make them aware of their own process. This encourages them to manipulate with their own process of learning for improving their performance.

- To *reduce the negative impact of extrinsic motivation*. It is found that once the students become aware of their own ways of learning and their capabilities to modify their own processes, they can learn better. Such awareness about their own learning process and their capabilities to modify those acts as an intrinsic motivation for their learning and their actions are no more contingent on any extrinsic motivation like learning for examination or learning for getting gold medal etc.

Notes

- *To improve their performance significantly* thereby raising their self- esteem, promoting self-learning through intrinsic motivation and thus reducing the work load of the teacher.

The purpose of this assessment is to improve quality of student learning and should not be evaluative or involve grading of students. This can also lead to curricular modifications when specific courses have not met the student learning outcomes. It can improve instructional quality by engaging the teacher in the design and practice of the course goals and objectives and the course impact on the programme.

A brief summary of the characteristics of the formative assessment and the role it plays in improving the performances of both students and teachers is presented in the Box 13.3.

Formative Assessment:

- Builds on students' prior knowledge and experience in designing what is taught.

- Is conducted at regular intervals on informal basis.

- Is diagnostic and remedial.

- Ensures provision for effective feedback.

- Provides a platform for the active involvement of students in their own learning.

- Provides feedback enabling teachers to adjust their classroom interaction strategies to the emerging needs of the students.

- Encourages intrinsic motivation and self-esteem of students, both of which have crucial influences on learning performance.

- Recognizes the need for students to be able to assess themselves and understand how to improve.

- Incorporates varied learning styles to decide how and what to teach.

- Encourages students to understand the criteria that will be used to judge their work.

- Offers an opportunity to students to improve their work after they get the feedback.

- Helps students to support their peer group and vice-versa.

(Source: *Continuous and Comprehensive Evaluation: Manual for Teachers, CBSE, 2010*)

Notes

Box 13.3 Features of Formative Assessment

● *Summative Assessment*

Summative assessment refers to the assessment of the learning that 'sums' or 'summarizes' the development of students at a particular time. It is a process of assessing (and grading or ranking) the learning of students at a point of time.

Testing processes like the end of a course, a term orannual examinations are examples of the **summative assessment** and the tests used in these assessment programmes are called **summative tests**.While the formative tests are based on limited objectives or content, summative tests sample the whole of the prescribed content and the universe of the expected learning outcomes and give an overall total picture of the students' achievement at the time of assessment.In a learning-teaching situation, summative assessments are typically given at the end of a course to determine how much the students have learned from the whole course and if they have met the prescribed academic standards. They are conducted formally and can be in the form of quizzes, essays, tests or projects. The features of summative assessment are given in Box 13.4.

Summative Assessment:

● Is the assessment of learning performance which is conducted at the end of a course or a unit of a course.

● Generally is taken by students at the end of a course or academic year to demonstrate the "sum" of what they have learned.

● Utilises the most traditional assessment methods of evaluating students' work.

● The results are used for ranking or grading the students which are required in planning any large scale academic intervention, inter and intra school comparison in terms of achievement.

(Source: Continuous and Comprehensive Evaluation: Manual for Teachers, CBSE, 2010.)

Box 13.4 Features of Summative Assessment

The differences between formative and summative assessment is illustrated in the following table.

Notes

<div align="center">

Table 13.2:
Differences between Formative and Summative Assessment

</div>

Formative Assessment	Summative Assessment
Used to determine how much the students have learned and what they still have to learn	Used to determine a student's overall performance in a certain prescribed course
Allows teachers to assess their teaching methods and make changes to help students understand the lesson during the school year	Allows teachers to change their teaching methods for the next school year, if students did not perform well
Grades do not carry much weight	Grades are the basis for determining the readiness of the student to take statewide tests and in evaluating his overall academic performance
Frequently administered during the teaching-learning process	Administered at the terminal stage of a course.
Less formal, conducted at the school level by the classroom teacher	More formal, may be conducted at the school level with instruction from district/ state authorities
Can be flexible as per the needs of the students	Inflexible, one test for all students, uniform way of conducting and uniform standard of interpreting test scores.
Process oriented	Outcome oriented

To sum up, summative and formative assessments are often referred to, in a learning context, as *assessment of learning* and *assessment for learning* respectively.

Assessment of learning is generally summative in nature occurring at the end of a class, course, semester or academic year and intended to measure learning outcomes and reports these outcomes to students, parents and administrators.

Assessment for learning is, generally, formative in nature and helps teachers to monitor their students' progress and to modify the instruction accordingly. It also helps students to monitor their own progress as they get feedback from their peers and the teacher and find opportunity to revise and refine their thinking.

However, it must be remembered that formative assessment supplements summative assessment and each type of assessment has its own importance in the learning process.

E3. Give a reason as to why the marks are important in summative assessment and not in formative assessment.

13.4 CONTINUOUS AND COMPREHENSIVE EVALUATION (CCE)

Notes

Evaluation measures not only the progress and achievement of the students but also the effectiveness of the learning-teaching materials and methods used for curricular transaction. It is an integral component of curriculum with the purposes of effective delivery and further improvement in the learning-teaching process. Hence, it is important not only for the students, but also for the teachers.

Very oftenwe view evaluation or assessment as something administered by the teachers and taken by the students at the terminal stage of learning. When evaluation is seen as an end of the learning exercise, both the teachers and the students are likely to keep it outside the teaching-learning process, rendering assessment broadly inappropriate and strange to the curriculum. Further, such a perception is associated with anxiety and stress for students. On the contrary, if evaluation is seen as an integral part of the learning-teaching process, it tends to become continuous. Every situation for learning is also a situation for evaluation. When it is included in the learning-teaching process, students will not perceive tests and examination with fear. It will rather lead to identification of students' strength and weakness. Once students' strength is explored, it will be easier to take follow-up action which may be either remedial to remove their learning difficulties or enrichment to enhance their learning level.

The scope of evaluation in schools extends to almost all the areas of students' personality development. It includes both scholastic and co-scholastic areas to be called as *comprehensive*. For example, scores or grades in Mathematics represent the scholastic competency and attitude towards the subject, interest in the subject represent co-scholastic competency. Both the aspects are interrelated and are in line with the goals of education. If evaluation is continuous, the strengths and weaknesses of students will be more prominent giving them opportunity to understand and improve themselves. It also provides feedback to the teachers for modifying their teaching strategies.

13.4.1 Concept, Process and the Need of CCE

Education intends to promote all-round development of the student. Hence, Continuous and Comprehensive Evaluation (CCE) is to be carried out in relation to students' cognitive, affective and psycho-motor growth. Cognitive growth refers to the intellectual development of students (such as students' knowledge, comprehension, application, analysis, synthesis and evaluation). Affective growth emphasizes students' attitude, interest and personal development. Psycho-motor growth deals with students' ability to perform some activity or do some practical work. Therefore, if the learning-teaching process is to ensure all-round development, evaluation of the students has to be continuous and comprehensive.

Notes

To bring about improvement in the quality of education and the holistic development of the child, evaluation process needs to focus adequately on both scholastic and non-scholastic areas of development. The comprehensive evaluation also needs to have continuity at regular intervals throughout the academic year.

Now analyse the on-going evaluation practice in elementary schools and try to answer the following questions?

● Does it give a complete picture of the child about what s/he knows and what s/he can apply in the real life?

● Does it say something about the students' potentials?

● Does it help us as teachers to do something good enough?

● Does the result of evaluation help the teachers and the planners to improve the quality of education?

You will realise that you donot get satisfactory answers to these questions. The need for CCE is apparent and we can say that CCE is needed to:

● provide a holistic profile of the student through assessment of both scholastic and non-scholastic aspects of education;

● identify the latent talents of the students in different contexts;

● identity strategies for raising students' achievement;

● plan a Comprehensive Evaluation Programme for improving schools;

● suggest suitable tools and techniques for achieving continuous comprehensive evaluation;

● use evaluation as a tool for continuous improvement of the school and the students;

● suggest ways and strategies of sensitizing school administrators, parents and the community about CCE.

(*Source: Continuous and Comprehensive Evaluation: Manual for Teachers, CBSE, 2010*)

The term *'continuous'* emphasizes that evaluation of identified aspects of student's growth and development is a continuous process rather than an event, built into the total learning-teaching process and spread over the entire span of academic session. It means regularity ofassessment, frequency of unit testing, diagnosis of learning gaps, use ofcorrective measures, retesting and feedback of evidence to teachers andstudents for their self-evaluation.

The term *'comprehensive'* means that this process attempts to cover both the scholastic and the co-scholastic aspects of the student's growth and development. Since abilities, interest, attitudes and aptitudes aremanifested in different forms and activities, the term impliesapplication of variety of tools and techniques (both testing and non-testing)and aims at assessing a student's development in areas of learning, like: Knowing, Understanding, Applying, Analysing, Evaluating, Creating, and Innovating etc.

We can hence define CCE as follows

CCE is a process of ensuring learning performance of students through both formative and summative evaluation in different areas such as cognitive, affective and psycho-motor to promote all round development of the students.

The features of CCE are:

● It is school based evaluation of students covering all aspects of students' development.

● The 'continuous' aspect of CCE takes care of 'continual' and periodicity' aspect of evaluation.

● Continual, means assessment of students in the beginning of instructions (placement evaluation) and assessment during the instructional process (formative evaluation) done informally using multiple techniques of evaluation.

● Periodicity means assessment of performance done frequently at the end of unit/term using certain standards (i.e. acceptable level of performance based on the objectives).

● The 'comprehensive' component of CCE takes care of assessment of all round development of the child's personality. It includes assessment in Scholastic as well as Co-Scholastic aspects of the student's growth.

● Scholastic aspects include subject specific areas, whereas Co-Scholastic aspects include Personal-Social Qualities, Co-Curricular Activities, Attitudes and Values.

● Assessment in Scholastic areas is done informally and formally using multiple techniques of evaluation continually and periodically. The diagnostic evaluation takes place at the end of a unit/term as a test. The causes of poor performance and the areas of poor performance are diagnosed using diagnostic tests. These are followed with appropriate interventions followed by retesting.

● Assessment in Co-Scholastic areas is done using multiple techniques on the basis of identified criteria, while assessment of personal-social qualities is done on the basis of Indicators of Assessment and Checklists.

(Source – Position Paper, National Focus Group: Examination Reforms, p.25).

Notes

Notes

Let us consider the objectives of CCE.

The objectives of CCE are:

- To help develop cognitive, psychomotor and affective aspects of the students' personality;

- To lay emphasis on thought process and de-emphasize memorization;

- To make evaluation an integral part of teaching-learning process;

- To use evaluation for improvement of students achievement and teaching-learning strategies on the basis of regular diagnosis followed by remedial instructions;

- To use evaluation as a quality control device to bridge the gap between actual performance and desired performance, and to maintain desired standard of performance;

- To take appropriate decisions about the student, the process of learning and the learning environment;

- To make the process of learning and teaching a learning-centered activity.

(Source: *Continuous and Comprehensive Evaluation: Manual for Teachers, CBSE, 2010*)

Box 13.5 Objectives of CCE

Thus we can say that the major emphasis of CCE is on the continuous growth of the students ensuring their intellectual, emotional, physical, cultural and social development and therefore it will not be merely limited to assessment of students' scholastic attainments. CCE uses assessment as a means to provide feedback to both teachers and students to make suitable changes in their efforts to improve learning. It also motivates students and gives a comprehensive picture of the students' profile.

E4. As a teacher, while evaluating learning of the students, what should you do and what should you avoid to do?

13.4.1 Use of Quantitative and Qualitative Data for CCE

Evaluation methods and the data they produce are grouped into two basic categories: quantitative and qualitative. In general, quantitative methods produce 'hard numbers' while qualitative methods capture descriptive data. The method(s) you generally use are determined by the purpose(s) of your evaluation and the resources you have to design and use.

What do the teachers do? They want both a 'number' and 'a description of the number explaining it'. So, both quantitative and qualitative techniques produce a richer and more comprehensive understanding about students' learning in its varied aspects.

At the most basic level, data are considered quantitative if they are in terms of numbers and qualitative if they are in terms of words. However, qualitative data can also include photos, videos, audio recordings and other non-text data. For example; when you say *'Soma has secured 80 marks out of 100 in Mathematics in Class – V',* this indicates a quantitative picture about Soma in mathematics. But when you say, *'Tapu is good at dancing'* or *'Mahesh's handwriting is excellent'* or *'Akshayaattracts everybody while singing'*, these represent some qualitative information about the individual student.

There are different methods of collecting data. Some methods provide quantitative data while some methods provide qualitative data. *Quantitative methods* (e.g. experiments, questionnaires, psychometric tests, etc.) which focus on numbers and frequencies rather than on meaning and experienceprovide information which can be easilyanalysed statistically and are fairly reliable but hardly provide in-depth description. *Qualitative methods* (e.g. case studies and interviews, etc.) which are concerned with describing meaning, rather than with drawing statistical inferences provide a more in-depth and rich description but are subjective in nature.

Different tools and techniques used to collect and analyse quantitative and qualitative data are given in following Table 13.3.

Table 13.3 Tools and Techniques for analyzing
Quantitative and Qualitative Data

Quantitative	Qualitative
● Achievement Tests	● Observation, Interview, portfolio, case study, project, assignment
● Surveys	● Focus Group Discussion
● Questionnaires	● Field notes, Diaries
● Pre/post Tests	● Video, Audio recordings, photographs
● Existing Database	● Documents (reports, meeting minutes, etc.)

How are quantitative and qualitative data different?

The differences between quantitative and qualitative data are given in the following Table 13.4.

Notes

Table 13.4 Differences between Quantitative and Qualitative Data

Quantitative data	Qualitative data
Explains 'who', 'what', 'when' 'how much', and 'how many'	Explains '*how*' and '*why*'
Deals with numbers	Deals with descriptions
Data can be observed and measured exactly	Data can be observed and assessed approximately/indirectly
Usually gathered by surveys from large number of respondents	Data can be collected individually or from the group of respondents
It is useful when pieces of information required can be counted mathematically and analyzed using statistical methods	It is useful when a broader understanding and explanation is required on a particular topic for which quantitative data alone is not sufficient
It is used when 'accurate' and 'precise' data are required	When information is needed on 'what students think about a particular situation, and what are their priorities'; it is useful. It is also useful while seeking to understand 'why students behave in a certain way'.
Ensures objectivity, reliability and the ability to generalize; but hardly provides any in-depth description	It can't be generalized
Data can be generated through the same tool irrespective of context	Context is important in qualitative data

Data from multiple sources enrich decision making about learning that leads to increased results for every student. Multiple sources include common formative and summative assessments, performance assessments, observations, work samples, portfolios, assignments, projects and self-report, etc. The use of multiple sources of data offers a balanced and more comprehensive analysis of students than any single type or source of data. You must realise that, data alone can do a little to inform decision making and increase effectiveness. Thorough analysis and cross-checking of data are essential for taking decisions relating to learning.

13.5 LET US SUM UP

- Measurement refers to the process by which the attributes or dimensions of some object or phenomena are quantified.

- Assessment is a process by which information is obtained relative to some known objective or goal.

- Evaluation refers to the value judgement made on the phenomenon, taking into consideration the quantitative and/or the qualitative information collected on it over a particular period of time.

- The entire classroom process has three major components/stages such as; (i) deciding the expected learning outcomes, (ii) planning and conducting classroom transaction, and (iii) assessment of students' progress in learning.

- The expected learning outcomes need to be 'specific', 'measurable', 'achievable', 'realistic' and 'time-bound' (SMART).

- The assessment that is conducted during the formative stage of learning i.e. when the student is actually in the process of learning is called *formative assessment*. It is an on-going process usually carried out by the teacher to continuously monitor student's progress in a non-threatening and supportive environment. Such assessment can also involve the student himself/herself (self-assessment) or the peer group (peer appraisal). It is carried out during the period of teaching-learning for providing continuous feedback to both the teachers and the students.

- Summative assessment refers to the assessment of the learning that 'sums' or 'summarizes' the development of students at a particular time. It is a process of assessing (and grading or ranking) the learning of students at a point of time. In a learning-teaching situation summative assessment is generally carried out at the end of a course or a term in which typically a course grade is assigned to students to determine how much the students have learned from the whole course and if they have met the prescribed academic standards. Summative assessments are conducted formally and can be in the form of quizzes, essays, tests or projects.

- In CCE, the term 'continuous' emphasize that evaluation of identified aspects of student's growth and development is a continuous process rather than an event, built into the total learning-teaching process and spread over the entire span of the academic session. It means regularity of assessment, frequency of unit testing, diagnosis of learning gaps, use of corrective measures, retesting and feedback of evidence to teachers and students for their self-evaluation. The term *'comprehensive'* means that this process of evaluation attempts to cover both the scholastic and the co-scholastic aspects of the student's growth and development.

Notes

- CCE is a process of ensuring learning performance of students through both formative and summative evaluation in different areas such as cognitive, affective and psycho-motor to promote all round development of the students.

- Evaluationmethods and the data they produce are grouped into two basic categories: quantitative and qualitative. In general, quantitative methods produce 'hard numbers' while qualitative methods capture 'descriptive data'. Both quantitative and qualitative techniques produce a richer and more comprehensive understanding about students' learning in its varied aspects. The method(s) generally used are determined by the purpose(s) of the evaluation.

- Quantitative methods (e.g. experiments, questionnaires and psychometric tests etc.)are those which focus on numbers and frequencies rather than on meaning and experience and provide information which is easy to analyse statistically and fairly reliable but hardly provide in-depth description. Qualitative methods (e.g. case studies and interviews etc.) are ways of collecting data which are concerned with describing meaning, rather than with drawing statistical inferences providing a more in-depth and rich description subjective in nature.

13.6 MODEL ANSWERS TO CHECK YOUR PROGRESS

E1. Suman takes an achievement test on Percentage and obtains 15 out of 25 marks. If she repeats the same test after a month, she would likely to secure more marks because of the following possible reasons:

- She would have memorized the answers

- She would have thoroughly practised the test

- She could have clarified her doubts in consultation with her teacher / parents / peers

E2. In addition to the marks obtained by Jaba in Science, you may choose any three of the following aspects for assessing her progress in learning Science:

- Skill of observing the nature and natural elements;

- Skill of experimentation;

- Skill of analyzing, categorizing and synthesizing things objectively;

- Conducting projects which are scientific in nature;

- Skill of asking questions; etc.

Notes

E3. The marks are important in summative assessment but not in formative assessment because summative assessment

- determines how much the students have learned from the whole course and if they have met the prescribed academic standards.

- determines the position of a student in relation to other students in the class at the end of the term/course.

- helps in assigning students a course grade.

E 4. As a teacher, while evaluating learning of the students one *should*

- Use a variety of ways to collect information about the student's learning and progress in all subjects

- Collect information continuously and record the same

- Give importance to each student's way of responding and learning and the span of time he/she or the child it takes to do so

- Report on a continuous basis and be sensitive to every student's response

- Provide feedback that will lead to positive action and help the student to do better

- As a teacher, while evaluating learning of the students one *shouldn't*;

- Label students as slow, poor, intelligent etc.

- Make comparisons between them

- Give negative statements

13.7 SUGGESTED READINGS AND REFERENCES

1. Bridges, L. (1995). Assessment: Continuous learning. California: Stenhouse Publishers.

2. Central Board of Secondary Education (2010). Continuous and Comprehensive Evaluation: Manual for Teachers. Shiksha Kendra, Delhi.

3. Gallagher, J.D. (1998). Classroom assessment for teachers. New Jersey: Prentice-Hall Inc.

4. Grauwe, A.D. &Naidoo, J.P. (2002). School Evaluation for Quality Improvement: An Asian Network of Training and Research Institutions in Educational Planning (ANTRIEP) Report (Ed.). Kuala Lumpur, Malaysia.

5. Gronlund, N.E. & Linn, R. (1990). Measurement and Evaluation in Teaching (6th Ed.). Macmillan Publishing, New York.

6. Hogan, T.P. (2007). Educational Assessment: A practical introduction. Danvers: Wiley.

Notes

7. Hopkins, K. D. & Stanley, J. C. (1981). Educational and Psychological Measurement and Evaluation.Englewood Cliffs, N. J. Prentice Hall.

8. National Council of Educational Research and Training (2005). National Curriculum Framework – 2005.Sri AurobindoMarg, New Delhi - 110 016.

9. National Council of Educational Research and Training (2006). Position Paper: National Focus Group on Examination Reforms. Sri AurobindoMarg, New Delhi - 110 016.

13.8 UNIT-END EXERCISE

1. Describe the roles of summative and formative assessments for effective promotion of students' learning.

2. As a teacher, how would you like to implement CCE in your school?

UNIT 14 LEARNING AND ASSESSMENT

STRUCTURE

14.0 INTRODUCTION

You might have observed that in all the blocks of this course, the focus has been on learning and learning – centred education. 'How children learn' and 'What are the ways to facilitate maximum learning' have been the focus in the discussion of various issues of classroom processes. Teaching, teaching-learning materials, classroom management, assessment and evaluation and other such issues relating to the classroom processes have been presented as elements of facilitating conditions for learners to learn.

Traditionally, the learning and evaluation processes in our schools encourage competitions among students within a class. At the end of any class examination, we try to analyse the results to satisfy ourselves by knowing the answers to several questions like *'who has stood first, second, third..?'*, or *'how many have got A-grade, B-grade…?'* or *' how many have failed to secure at least 30 per cent of total marks in Language?'*. However, through all such questions we discriminate the learners as per their marks or grades which are obtained using tests or other assessment tools meant to identify students' abilities or proficiencies.

Based on the results, sometimes we group the students in order to provide separate instructions to improve their achievements. For example, three groups can be formed on the basis of the marks in Mathematics in class V – one group of

Notes

students securing more than 60% of marks (called high performing group), second group securing marks between 30 to 59% (average performing group) and the third group of the students securing less than 30% (low performing group). Extra coaching is provided to the high performers are to win scholarships and awards in Mathematics competitions while the low performers are given extra care for securing more than 30% so that they are not labelled as 'failures'. Although this type of evaluation encourages competition within any class or group of students, it definitely perpetuates discrimination among students.

The system of school education is going through significant changes. The focus is not on teaching rather it has shifted to learning. In a learning-centred system it is believed that any normal child can attain high levels of achievement if he/she is provided facilitating conditions for learning. To attain this objective, the traditional competition based examination does not help. Instead such evaluation/assessment practices are to be adopted in which the standards for success are made explicit and all students are expected to reach those standards. In such evaluation the grading system does not grade the students rather grades performances. There are no grade 'A' students; but there are only grade 'A' performances and the teacher must teach and assess in ways that motivate all students to succeed. What are then the changing beliefs and processes of learning assessment?

In this unit, you will be introduced to several assessment tools and procedures which are now used in the classrooms not only for assessment of what have been acquired by the student but also to promote learning.

For completing this unit, you will require about ten hours of study.

14.1 LEARNING OBJECTIVES

After completing this unit you will be able to:

● Relate the process of assessment to different stages of learning in the classroom.

● Use assessment tools and procedures for facilitating learning in the classroom.

● Utilize assessment events as sources of learning.

● Plan assessment programmes in your school.

14.2 LEARNING AND ASSESSMENT

In the previous Units we came to know that although learning and assessment go side by side, they are two distinct processes. In this context, let us consider three situations given below:

Notes

Situation 1: Ms. Sohana took six periods to teach the topic 'Our Struggle for Freedom' to class V students of her school. After completing the topic she gave a test to ascertain the extent of knowledge and understanding each student has acquired on the topic.

Situation 2: Mr.Rohan while helping the students of Class IV in adding and subtracting fractions observed that several students are not able to complete the addition of two improper fractions. He gave a small test with questions from addition of proper fractions (one item of addition of two similar fractions, three items from addition of proper and improper fractions and four items from addition of improper fractions). He analysed the responses of each student and found that nearly 45% of students were not clear in adding proper with improper fractions which was affecting their performance in adding two improper fractions. He, therefore, focused on developing the understanding of improper fractions and their addition with proper fractions after which he proceeded to teach the addition of two improper fractions.

Situation 3: Ms.Soha, teaching Language, asked her students in Class VII to write a short description of the Independence Day Celebrations in the school and in their locality. The objective was to assess their ability of composing paragraphs. Before the students went for collecting information, they discussed the criteria and process of collecting information. They decided that these criteria would act as the criteria for assessing the paragraph. Ms.Soha managed to make them agree on the criteria of assessment giving full independence to each student to design their descriptions as they liked. While collecting information on the celebrations at different places, they could observe the similarities and dissimilarities in processes of observing the day. At every step of collection and organization of information, each student was individually referring to the criteria and tried to improve and modify their process. They also gathered the brochures developed for the day by different organizations and the feelings of some members including children of the locality. In between the description or at the end of the description they included their thoughts about the day and the enthusiasm of the people. After they completed the project, they sat together in the class with Ms. Soha and read out each report loudly. They tried to give grades for each description following the decided criterion for assessment. After the assessment, the students were asked to improve their descriptions based on the observations of assessment.

Notes

> **ACTIVITY-1**
>
> Think for a while and list the similarities and differences in the process and objectives of assessment in the three situations given above.

Is there any difference among the process and objectives of assessment in the above three situations?

Well we are quite familiar with the first situation. After completion of teaching a unit or a topic, we always desire to know the extent of acquisition of knowledge and understanding of the topic and compare the achievement of each individual against the desired level of achievement. In other words, we assess the *product of learning*. This process is called *'Assessment OF Learning'* and is usually done after the completion of the topic/unit of lesson.

In the second situation, Mr.Rohan was assessing the performance of students while the teaching -learning process was going on. He used the results of assessment for improvement of learning and his own teaching process. This is a kind of formative assessment discussed in earlier units and is called *'Assessment for Learning'*.

Ms.Soha's students decided the criteria of assessment, referred to those during the process of learning which helped them to keep their learning process in proper direction and to improve and modify their learning process as well. In short, the students were utilizing assessment criteria in the process of learning. That is why this is called *'Assessment AS Learning'*.

While we are mostly familiar with the assessment of learning, let us understand the latter two processes which focus on learning- centred.

14.2.1 Assessment OF Learning

Assessment of learning refers to those assessments – oral, performance and written, or combination of two or more of these modes – that occur at or near the end of an instructional unit or term. *Using this type of assessment you can judge the ability of your students to synthesize and demonstrate the concepts or experiences they have acquired during the period of instruction.* The results of assessment of learning are universally regarded as important indicators for monitoring students learning growth. These are also used for different comparisons like a student's performance in different subjects, comparison among the students in a class, inter-school comparisons etc. The results are also used in planning curricular activities for the next term, session and/or next academic session. Further, the results of assessment of learning expressed in marks or grades are

Notes

familiar to every stakeholders of school learning about which you have already learnt in the previous units.

Tools and Strategies: In the assessment of learning you have to use a variety of tools and strategies depending on the nature of the task to be assessed. As has been stated in the earlier units, you are to choose the tools and strategies purposefully depending on the amount and type of information required. Examples of some tools used in the assessment of learning are tests using various types of questions, anecdotal records (descriptions of important events in the life of the student related to the task or process being assessed), rating scales, check lists, etc.

The strategies in this assessment include observation, student's responses (written, oral), analysis of the student's work, discussions with students.

Expected Responsibilities: As a teacher, you have to realize that the entire responsibility of the assessment of learning and its follow up lies with you. Here are some aspects that need your attention:

● You must ensure that the objectives of the assessment task or assignment are clearly understood by the students.

● You must prepare reasonable time limits for the completion of the tasks/ assignments.

● You need to be sensitive to the challenges faced by some students in completing the task/assignment.

● You must collect sufficient evidence on which you base your decisions.

⚒ ACTIVITY-2

You are familiar with the processes of 'Assessment OF Learning' in your school. Prepare a list of actions that are to be taken to make these assessments more effective for promoting quality of students' learning and achievement.

You must have strong justifications for the marks/grades that you give to the students.

Making Assessment OF Learning Effective: Given below are some points that you should take care of in order to ensure that the Assessment OF learning is valid and fair,.

● You must gather enough of evidence (written, oral and/or performance), so that it would be possible on your part to provide an accurate picture of a student's achievement. Only relying on the results of written tests (or examination results) will not be sufficient for the purpose.

- You must use a variety of assessment strategies for collecting evidence so that all students can demonstrate their learning. If you just conduct one written test and use it as evidence for assessment of learning, it is highly probable that quite a number of students might have felt uncomfortable to answer some items. Thus, they would be given poor score/grade although they could have performed better on another task.

- Within an assessment task/tool there should be adequate choices available for students to address their individual needs.

- Even if you collected a number of data of your students on their learning a particular content unit, you must base the assessment of learning on the most consistent and most recent data.

- Before you start assessment of learning on a topic/area, ensure that each and every student has been provided enough opportunities to practice with appropriate feedback given for improvement during the practice.

- You must take extreme care in scoring or grading the responses and performances of the students without any bias. As has been stated earlier, you must award marks or grades using your professional judgment so that you can justify the marks/grades as and when required.

- If you find some students' results are inconsistent or fluctuating during recent assessments, review them carefully, and if necessary, probe the learning conditions of these students at home and at school to find out the real reasons for such inconsistent results.

E1. Which of the following is NOT an example of assessment OF learning?

A. Annual Examination

B. Assessment of home work

C. Scholarship Examination

E2. Can the scores/grades awarded on the annual examination be used for class promotion of the students studying in primary schools?

14.2.2 Assessment for Learning

Think about the assessment of learning in which the results of the assessment are available and shared at the end of a content unit/topic or at the end of a term. Would it be too late to act upon the feedback received at the end of the unit or term?

If a student gets a feedback on his/her performance at the right moment and not at the end of the unit/term, then he/she can probably fix his/her ways of learning

and demonstrate improved performance. Therefore, assessment is effective when it is designed specifically to help students improve their learning and for that, assessment need to be more frequent and informal coupled with timely feedback mechanism. This type of assessment is termed as *'Assessment for Learning'*.

Notes

The major *objectives of Assessment for learning* are as follows:

- To make every child know how he/she is doing, understand what he/she needs to do to improve and how to get there. The child gets support he/she needs to be motivated to become an active learner to continuously improve his/her learning;

- To equip every teacher to make well-founded judgments about students' attainment, understand the concepts and principles of progression, and know how to use their assessment results to plan for improvement of learning of each student, particularly of those who are not fulfilling their potential;

- To have in every school a structured and systematic assessment systems for making regular, useful, manageable and accurate assessments of students and for using the results of the assessment in tracking the learning progress of the students;

- To make every parent or guardian know how their child is doing, what they need to do to improve, and how they can support the child and their teachers.

Assessment FOR learning (AFL) comprises two phases—*initial or diagnostic assessment and formative assessment:*

- *Diagnostic Assessment* is assessment made before the learning of a unit commences in order to determine what a student does and does not know about a topic. This form of assessment helps to identify where your students are in their learning and what course of action appropriate to the learning levels of the students are needed to be taken for continuing or improving their learning. For example, if you are planning to teach the different states of India in class VI, you need to know whether the students are well conversant in using the atlas. If you find most of the students in the class know how to use an atlas, you can engage majority of class in working on an application of using atlas while you can work with a small group on how to use an atlas.

- *Formative assessment* is an assessment through which you can gather data during the learning process when the class progresses through a unit of study to determine a student's knowledge and skills, including learning gaps. You can use the results of formative assessment to guide learning and make timely change in your teaching strategy to suit the needs of your students. Considering the example of using atlas, you can provide feedback about the work the students have completed using the atlas and provide ideas for adjusting, rethinking, and articulating their learning.

Notes

- Through the formative assessment if you findthat most students did not understand what has been taught, you need to employ different/alternative methods to teach the concepts and/or skills before moving to the next lesson.

Following are the *characteristics of Assessment FOR learning (AFL):*

- It is responsive to all learners by identifying areas of strength and need of each and every student;

- It is descriptive in nature and is not judgmental and hence not evaluative;

- Through the use of high quality feedback, it informs students about what they have done well, where they have had difficulty, and what they need to do differently to improve their work;

- Since the learner has to be provided feedback in order to improve the on-going process of learning, the assessment is frequent and continuous in the learning process;

- It causes students to reflect upon their work and learning and take specific actions to improve them;

- It expects students to make errors and directs them to examine these errors in order to improve their learning;

- It involves students in structured self and peer examination of their work;

- It is planned and used in ways that it provides support to sustain students' learning so that ultimately they can demonstrate improved performance in the Assessment OF learning that will be used for grading and reporting purposes.

The UK Assessment Reform Group (1999) identifies *'The Big five Principles' of Assessment FOR learning* which are as follows

1. The provision of effective feedback to students.

2. The active involvement of students in their own learning.

3. Adjusting teaching to take account of the results of assessment.

4. Recognition of the profound influence assessment has on the motivation and self-esteem of students, both of which are critical influences on learning.

5. The need for students to be able to assess themselves and understand how to improve.

The Approaches and Methods of Assessment for Learning: When deciding on techniques for assessing learning of all students within a classroom situation consider to what extent the adopted method(s) enables you to assess the progress

Notes

of all students, ensuresstudents to get constructive feedback and helps you to get feedback on your teaching.

There are mainly *four approaches* of carrying out:

- *Teacher-led assessment* (using a wide range of methods like written or verbal testing, interactions with students, assignments, observation of student's activities etc.),

- *Learner self-assessment* (self-reflection on own performance and on others judgments),

- *Peer assessment* (Assessment of classmates on the response and performance of the learner),

- *Computer-based assessment* (using specially designed software).

Planning Assessment for Learning: Planning of assessment for learning need to be a part of the plan for the classroom teaching-learning since such an assessment is a simultaneous part of the classroom teaching-learning process. For an effective assessment for learning, you need to take care of the following aspects while preparing for classroom teaching-learning activities.

● Specify the purpose of assessment appropriate to learning outcomes of the concepts/unit/topic to be transacted in the classroom.

● Have clear picture of the classroom while the AFL is effectively taking place like:

  - Words, pictures, illustrations, and/or exemplars of students' work are displayed around the classroom;

  - Students are involved in collaborative assessment of their work with peers and/or teacher;

  - On- going feedback from the teacher and other students are taking place;

  - Students and teacher are using student-friendly language when assessing their work.

● Have enough of flexibility in the assessment procedure. Always have alternative methods ready to be use in case your planned method does not work in the real situation.

● Always begin with the diagnostic assessment, maybe informally, by preparing a 'Know-Want-Learn (KWL)' chart. This chart is usually organized around three headings: What we already know; What we want to learn; and What we have learned.

● Make provisions for timely feedback by you and by other students in the class and ensure improvements in students following the lines suggested in the feedbacks. Provide students with prompts on how to provide feedback and how to receive feedback.

● Develop a tracking system for maintaining continuity of assessment and monitoring learning progress that works for you.

Feedback in Assessment FOR Learning

The main purpose of an assessment for learning is to provide feedback to both the teacher and student regarding the student's progress towards achieving the learning objective(s). This feedback should be used by the teacher to revise and develop further instruction. You can visualize the role of the feedback in the assessment for learning from the following Fig 14.1.
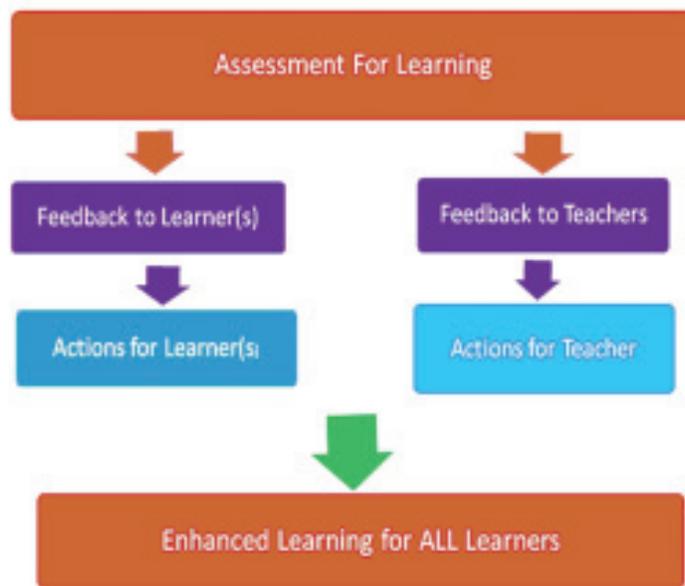
Fig 14.1: Feedback in Assessment For Learning

Giving constructive feedback – verbal and written – is a vital aspect of assessment for learning. You can provide feedback in a range of situations: instantly or through an informal reply to a more formally planned tests and assignments. While providing feedback to students following points need to be taken care of:

While giving written feedback:

- Respond to the content and the message in the writing first. Don't focus only on surface errors such as spelling or punctuation.

- Don't jump straight to the errors. Praise first.

- If writing is weak, select one or two particular areas to draw attention to. Don't cover work with ticks and crosses in red ink.

- Be specific. Indicate what action the student should take in relation to weaknesses that have been marked.

- Encourage the student to make corrections. Don't simply write the correct answers, spellings and so on.

When giving verbal feedback:

- Stress the positive. Always give specific feedback on what a student has done well.

- Celebrate what's been achieved and be clear about exactly what needs to improve next and how.

- Seek students' views and value their contribution. This will help them to get better at assessing their own work, which is vital to them in becoming independent students.

- Invite the student to comment on what you do well. Feedback is not a one-way process.

- Frame questions carefully. Use open ended questions and resist asking more than one question at a time.

- Use prompts such as *'Would you like to say more about that?'*

- Pause for a few seconds after posing a question or a response has been given, to encourage students to carefully consider and expand on what they have said.

- Avoid generalizations such as *'There are a lot of inaccuracies'*. Instead focus on specific areas for development which you can discuss with the student.

- Focus on things that each student can change, and avoid overloading them with too much feedback at once.

- Be sensitive if you have to give feedback to one person in a group. Will they feel undermined if others hear?

- Look for ways to move forward together. Share ideas and explore solutions rather than always putting forward your own suggestions.

- Agree what you will both do as a result. This could include agreeing new targets or planning learning opportunities.

- Adapt your approach to suit individual or group situations.

Sometimes, we also use non-written and nonverbal feedback during classroom transaction or when the students are engaged in activities. These are in the form of body gestures like looking into the eyes of particular students, approval or disapproval through pointing fingers or nodding head, through approving smiles.

Notes

For effective feedback, given either verbally or in writing to students' performances you need to take care of the following points

- Provide the feedback without any delay; otherwise the feedback may lose its relevance.

- Use accurate, descriptive statements instead of marks with a will to help students develop independent learning habits;

- Include statements of strengths and weaknesses of a student and guide on how to improve;

- Provide one or two learning goals or targets which can be achieved by the students as next steps.

The positive effects of timely feedback based on the assessment for learning have been confirmed by several researchers. It has been observed by Hattie (2002) that giving feedback on learning errors and getting the student to correct them and identify strategies to improve future work is directly linked to significant improvement in achievement rates.

To create a culture of success, where all students believe they can achieve, as a teacher you need to make sure that students are clear about:

- what they are meant to be doing,

- how it will be assessed,

- what they are doing well, and

- what is wrong and what needs to be done to put it right.

As stated by Black and William (1999), avoid reference to ability and competition and comparison with others. Butler (1988) says that, feedback using constructive comments leads to improved performance – up by 33%. Marking using grades can have a negative effect on student performance, particularly for low achievers.

E3. State any two benefits of assessment for learning.

E4. What is the most appropriate form of feedback while assessing home assignment?

A. Corrections marking the mistakes with red crosses;

B. Specific comments given in written form

C. Only through verbal discussion

E5. Is assessment for learning is a form of formative assessment? Give reasons for your answer.

14.2.3 Assessment as learning

When we gather new experiences while assessing our own performance or performance of others, the processes of learning and assessment lose the line of demarcation between them. In such instances assessment becomes a learning process.

Notes

> *Situation 4:Ms.Ananta, a student of class VII was collecting all his work in a portfolio for presenting it for assessment by teacher and his classmates. While assembling and arranging the work in a proper order, he tried to list the indicators of the portfolio assessment. He recalled his earlier experiences and found that he has not included any model or map in the collection and he thought that without these materials the collection would be incomplete. After making some models and one map of his district, he again tried to order his materials. There were several materials – two essays, one story published in the school magazine, five mathematical puzzles collected from different sources, four slogans developed for 'Education for all' rally, paper models of different solids, map of his district, collection of coloured pebbles . He was thoughtful of how to arrange these materials so as to attract the attention of the teacher and classmates who would assess his portfolio. He came up with a plan. He developed a story line and prepared some additional posters depicting the story line and within it he arranged the products in such a way that the observer, following the story line, could neither afford to miss any work of Ms.Ananta nor could consider any material to be irrelevant in the total collection.*

Consider the following situation

Let us reflect what Ms. Ananta was doing:

- He was trying to arrange the collection of his products for assessment;

- He listed the pointers of assessment (learning outcomes);

- He developed some new material he thought as required for assessment;

- He tried to rearrange but found the products to be quite incongruent;

- He thought to have a way for a meaningful arrangement; and

- He struck upon a story line and then completed the arrangement.

All the while Ananta was preparing for an assessment event and at the same time he was assessing himself and his materials- their adequacy, relevance and meaningfulness so far as learning outcomes (indicators of assessment) were concerned. Do you think he was learning while he was assessing and was the assessment itself not a learning event for him?

Notes

Assessment as learning is comparatively most difficult of the three categories of assessment. But yet it is the most important skill for a student to grasp and is crucial for independent progress in learning. In contrast to other approaches to assessment of learning, assessment as learning is entirely student controlled. It emphasizes the role of the student as the critical connector between assessment and learning.

Assessment as learning begins only when students become aware of the goals of instruction and the criteria for performance and strive to achieve the goals. In the process they get involved in goal-setting, monitoring their own progress, and reflecting on results. It implies that the students undertake all responsibilities to carry on this assessment while engaged in learning. Those students who are capable of analysing their own process of thinking (i.e. knowing about their process of knowing or meta-cognition) can effectively use assessment as learning which occurs throughout the learning process.

According to Lorna M. Earl (2006), assessment as learning is based on the conviction that the students are capable of becoming adaptable, flexible, and independent in their learning and decision-making.

Assessment as learning provides a variety of opportunities for the student to reflect on his/her learning through the processes of meta-cognition. This can be facilitated through brainstorming, group discussion, collaborative learning situations, and through peer and self- assessment. As a teacher the best thing that you can do is to convince your students for self-assessment and peer assessment which in turn help them to use assessment as learning.

Self-assessment helps students to

- Reflect on their own learning;
- Identify their strengths and areas where they need to improve using clear criteria related to the expectations and achievement levels;
- Set goals and identify next steps for learning;
- Develop skills in meta-cognition;
- Become independent, self-directed students;
- Select work for their portfolios that represent their progress and best efforts over time.

Peer-assessment helps students to:

- Consolidate their learning through dialogue and interaction with their peers;
- Learn how to give and receive constructive, explicit feedback based on clear criteria;
- Practice the concepts and skills explicitly modeled and taught through the activities/tasks.

E6. In which of the following situations assessment as learning is possible?

    A.   Unit Test

    B.   Group Test

    C.   Group learning

    D.   Collaborative learning

E7. State any one difference between assessment for learning and assessment as learning.

Notes

14.3 DESIGNING ASSESSMENT PLAN

If you are aiming at good assessment of student's learning progress, then you have to consider the learning style, strengths and needs of each student into account. You have to remember that assessment is an integral part of the learning process and is neither an addition to teaching-learning activities nor is a teacher-centred activity. It is flexible, driven by the expected learning outcomes and being an inseparable part of learning, is as continuous as the learning process. Therefore, planning for assessment should also be a part of the plan for teaching-learning activities for the class.

While planning for assessment in the classroom, you have to consider the following basic conditions:

- *Approaches to Assessment:* While it is advisable to adopt all the three approaches discussed in this unit, you have to decide how to go about it and which approach is to be your most preferred one. From the point of view of promoting learning, assessment as learning is the ultimate approach but not easy to adopt with group of students in our classrooms with diverse abilities. Assessment of learning is the most familiar approach and has importance from curricular and school management point of view. However, in day to day classroom transaction, assessment for learning needs to be used as an undeniable part of classroom learning process.

- *Purpose of assessment:* It is necessary to clearly state the specific purposes of the type of assessment you are conducting. This would help you as well as your students to act in desired direction appropriate to the type of assessment that is going to be used. Specifying the type of assessment would also help you to prepare or choose tools and strategies as per the levels of students.

- *Clarity in Learning Outcomes:* The purpose and the approach of the assessment are determined by the nature of the desired learning outcomes of the unit/topic taught. If the objective of teaching a topic is only to acquire

knowledge, then a written test for the assessment of learning would be sufficient. But if the objectives are more towards developing comprehension, application, analysis, synthesis or creativity, the purpose of the assessment would be to monitor the growth of the student's learning by combining different methods to have a holistic description of student's learning on a continuous basis and assessment for learning and/or assessment AS learning would be more preferred approaches.

● *Vision of Effective Assessment:* While planning an assessment programme, you must have a clear vision of what would be happening when the programme is going on. If you intend to go for assessment of learning you need to visualize the ideal and favourable conditions prevailing in the classroom or examination hall like the seating arrangement, the cleanliness of the room, the discipline among the students, a well prepared question paper, the availability of writing materials, no book or other helping materials in the room etc. Similarly, you need to visualize the scenario of your classroom where assessment for or assessment as learning is being encouraged. Such a vision building shall help you to plan for an effective assessment programme.

● *Provision of Time:* To conduct assessment of learning, you require specific time at the end of the topic/unit, at the end of a term and/or at the end of the session. Since you have to make elaborate preparation like preparing question paper, sitting arrangements, scrutiny of the answer scripts, recording and sharing the results, you have to plan for such assessment programmes much in advance. Of course for unit tests (at the end of a unit/topic), the time requirement would be much less, say within a normal class period on any working day. You must keep in mind that time spent for assessment of learning is at the cost of the available learning time in the school. If you give more time for such assessment, learning time in the school would be reduced accordingly.

However, since the assessment for learning and assessment as learning are both inseparable parts of the classroom learning process, you do not need specific time for conducting them. What is required is that you have to mention in your lesson note/plan the assessment activities you want to do during the period of instruction.

● *Students' Involvement:* While the students' roles are reduced to only responding to the tests in the assessment of learning, they are actively involved in the assessment for learning through their participation in different learning activities, responding to the teacher and peer group members, asking questions for clarification of doubts, helping classmates and such other several activities. The assessment as learning is totally driven by the student. You can only provide facilitating conditions for it.

Notes

- *Classroom Environment:* At the time of conducting assessment of learning in the classroom we usually ensure that there is no element in the classroom or its surroundings which might provide any cue for answering the questions. But for other two types of assessment, the classroom environment should be rich with learning materials. The walls, floor and every place in the room are to be used to provide student friendly situation for encouraging students to think, reflect and create ideas which are essential requirements for assessment FOR learning and assessment as learning.

- *Provision of Feedback:* We have already discussed the importance of feedback in the assessment programmes. The feedback in the assessment of learning is provided in well-designed report   using numerical scores or alphabetical grades indicating the level of performance of the student. Besides the student, the report is shared with parents and others who have some stake in the student's learning. But in assessment for learning, the feedback is instantaneous and mostly verbal and/or a description of student's behaviour or actions for which no elaborate planning is needed. However, these descriptions may be recorded on the response sheets of the student or in his/her daily diary which can be shared with the parents. In assessment AS learning, the student gets feedback from his own reflections and/or from peers for which you need not make any provision.

- *Incorporating the Change:* The whole exercise of assessment is to bring about further improvement in students' learning. Basing on the results of assessment you have to develop action points in consultation with each student for rectifying the mistakes, improving and enriching the learning. The cycle of assessment, diagnosis of strengths and weaknesses in learning, taking appropriate measures for improvement and enrichment goes on continuously in a spiral manner moving higher and higher along with grades the students are likely to proceed over the school years.

- *System of Continuous Monitoring:* For sustaining continuity and quality of the assessment programmes in the school, a group of teachers may be given responsibility to monitor the planning, conducting, recording, sharing the results and taking timely and appropriate follow up measures. All monitoring should be carried out in relation to the expected learning outcomes.

14.4 LET US SUM UP

- Assessment of learning of every student in a class is done with reference to the expected learning outcomes. Assessments can be categorized in relation to the purpose and timing in the learning sequence.

- Assessment of learning refers to those assessments like oral, performance and written, as well as combination of two or more of these modes, that occur at or near the end of an instructional unit or term. The results of the assessment of learning are recorded using marks or grades and are used to improve students' performance in the subsequent learning units.

- Assessment for learning is designed primarily to promote student learning and guide instruction through continuous feedback from the teacher and peers. Practice assignments, observation of classroom activities, involvement in projects and developing portfolios are examples of situations where assessment for learning can be effectively done.

- The primary purpose of assessment as learning is to provide students with the opportunity to reflect on their own learning. Self-assessment, peer assessment and goal setting activities are all examples of assessment as learning.

- While planning an assessment programme you need to take several aspects into consideration such as expected learning outcome, a clear vision of effective assessment, provision of time, students' involvement, congenial classroom environment, provision of feedback, system for monitoring assessment.

14.5 MODEL ANSWERS TO CHECK YOUR PROGRESS

E1. B

E2. No, since in primary classes no detention policy is in force throughout the country as a direction of RTE act, 2009.

E4. B

E6. D

14.6 SUGGESTED READINGS AND REFERENCES

1. Black, P & William, D (1999). Assessment for learning: Beyond the black box. London: Kings College London.

2. Butler, R (1988). Enhancing and undermining intrinsic motivation: effects of task-involving and ego-involving evaluation on interest and performance. British Journal of Educational Psychology, 56 (51–63).

3.   Cooper, Damian (2007). Talking about assessment, strategies, and tools to improve learning. Toronto, Ontario: Thomson Nelson.

4.   Earl, Lorna M. (2006). Assessment as learning: Using classroom assessment to maximize student learning. Thousand Oaks, California: Corwin Press.

Notes

14.7 UNIT- END EXERCISES

1.   Differentiate between assessment of learning and assessment for learning.

2.   Elaborate the role of feedback in the assessment for learning.

UNIT 15 TOOLS AND STRATEGIES OF ASSESSMENT

STRUCTURE

15 .0 INTRODUCTION

In the previous unit you have learnt the importance of assessment in the learning-teaching processes. You have learnt about the relationship of assessment with

classroom process and expected learning outcomes. CCE is a school based assessment system of students which covers all aspects of student development. CCE is hence not a onetime event rather it spreads over the entire span of an academic session. Continuity of CCE stresses on regularity of formative assessment within short interval of time, diagnosing the learning difficulties of the students, use of corrective measures and providing timely feedback to students. When you are assessing both the scholastic and co-scholastic aspect of a student, do you think a single tool or technique (for example a classroom test) would be sufficient for the purpose? Well, you have to depend upon several tools and techniques for comprehensive assessment.

Let us learn about the fundamental concepts of the tools and techniques of assessment in this Unit so that skills to construct different types of tools to assess the scholastic and co-scholastic aspect of each student can be developed.

This unit will take about 15 hours of study.

15.1 LEARNING OBJECTIVES

After completing this unit, you will be able to:

● Identify different types of tools used to assess the holistic development of the students;

● Develop and use achievement tests as well as other tools to gather information regarding the students.

● Develop the skills to frame different types of test items in the school subjects.

15.2 CONSTRUCTION AND USE OF ACHIEVE-MENT TEST

What do you understand by the concept of *'Achievement'?*

The dictionary meaning of the word Achievement is *"a thing somebody has done successfully, especially using his/her own effort and skill" (Oxford Advanced Student's Dictionary of Current English, 2005).* For example, Bijaya, a student in class VI, can solve 10 varieties of problems relating to Simple and Compound Interest successfully butSajan can solve only 4 varieties. We can then say that Bijaya has better achievement than Sajan in solving problems on Simple and Compound Interest. Bijaya could achieve more because he had acquired more knowledge, understanding and skills in the concepts of calculating interests in different contexts than what Sajan had acquired during same time. Achievement in this case is thus acquisition of experience to solve problems.

Notes

In order to assess the learning achievement of the students, usually we use tests in our schools. Such tests are prepared by you or supplied to you by the authorities or procured from the open market. In what ways the tests prepared by you are different from the others? Do the tests procured from the market serve your purpose? Critically think on these issues. Most of the teachers depend upon tests to know to what extent the students have been successful in the learning–teaching process and to what extent the learning objectives were achieved by the students. The test results are reflected in the form of score (commonly known as marks) or grade. Let us consider an example.

Suppose you are teaching mathematics in Grade –II on addition of two or more than two numbers which deals with the following concepts.

- addition of two-digit numbers without carry over,

- addition of two- digit numbers with carry over,

- row wise addition of two-digit numbers,

- Word problems on addition of two-digit numbers.

After teaching the concepts, you want to know the amount of experiences of addition acquired by each individual student. In such situations, we usually use achievement tests to know the extent of learning achievement of the students with respect to the expected learning outcomes covering knowledge, understanding, application, analysis, synthesis and evaluation skills. Such type of tests also helps the teacher to compare the performance of the student's achievement with the performance of other student's achievement.

E1. Stateany three uses of achievement tests in the classroom situation at elementary school level.

Now suppose you have constructed a good test in Mathematics for class V in your school. You know your students very well and the test that you have developed gives you the required information about their achievements in Mathematics. You are very satisfied with the performance of the test. Can this test be used by another teacher serving in a school at a far distance place in the tribal area of your state or in a school situated in a city? Well, we cannot be sure. At the best we can say that the test can work equally well if the students and the school conditions are same as your school. But, in the common examinations, only one set of tests is used in all schools throughout your state. These tests are carefully constructed following a strict process called *standardization* so that it is fare for all students studying in schools situated widely apart in the state. Thus there are two categories of tests:*teacher-made tests* and *standardized tests*. The tests used in annual secondary school certificate examination in all secondary schools of your state are examples of the standardized achievement test. Through the process of standardization the following properties of the test are ensured:

- The test items used are purposefully designed to measure a clearly defined achievement domain.

- The test items are based on standard content thereby confirming the provision of using identical test to different individuals in different places at different times.

- The test can be administered precisely under the same conditions.

- A standardized procedure of administering, scoring and interpreting the results of the test are followed.

The standardized achievement test consists of high quality test items which are developed by specialists, tried out and selected on the basis of difficulty level. However such standardized tests have limited use in monitoring the learning progress and using them for furthering learning of the students. Teacher made tests have more utility in formative assessments which has been discussed in the previous unit. Let us understand the various aspects of the teacher made tests.

15.2.1 Teacher Made Test

While teaching in a class, very often you have to use tests to assess levels of learning of each and every students of your class. These tests are essential for making the assessment more continuous and comprehensive. Some of you might have developed and used several such teacher made tests in your classroom to assess the student's progress on various occasions. Some important functions of the teacher-made test are:

- To reflect on the day–to-day teaching-learning activities of the school.

- To develop more efficient learning-teaching strategies.

- To know the ability of individual student. By knowing the abilities of the students, the teacher may be at an advantaged position to form different ability groups (you may refer unit 5 of Block 2 of this course).

- To diagnose the students' strengths and weaknesses, and this helps the teacher to plan for compensatory (remedial) and enrichment programmes.

E2. Analyse the example given below:

Mrs.Pandey plans meticulously for learning and teaching processes for her class. One day she planned to teach the concept of Highest Common Factor (HCF) to her students. She thought that before teaching the concept of HCF, she must know to what extent the students have learnt the concept of factors and multiples. So she developed a test for the purpose, administered that on her students, and then on the basis of the test results proceeded.

i) Do you think that the test prepared by Mrs Pandey helps her to realize her specific objectives?

ii) How was the test useful for Mrs Pandey?

iii) **Think of your class where you are teaching at present and write down one such example.**

The characteristics of teacher made tests are given below:

Table 15.1 Characteristics of Teacher Made Tests

Characteristics	Teacher made Achievement Tests
Direction for administration	No uniform directions are specified, depends upon the teacher who uses it;
Learning outcomes and Sampling of contents	Well adapted to outcomes and contents of local curriculum, The classroom teacher decides the quantum of content to be covered for a particular test;
Construction	Depends upon the classroom teacher and his/her capacity, often prepares the blue print, less scope for item analysis and try- out of the test items
Frequency of use	It depends upon the purpose of the test to serve
Purpose	To provide feedback, functions as a learning exercise, motivates the students to develop good study habits,
Use	Score comparisons and interpretations limited to that particular school not for comparison with other schools; best suited for measuring particular objectives set by the teacher.

The teacher should know how to plan, construct and use tests they prepare for getting true and accurate information regarding the learning outcomes in respect of his/her students. Otherwise, a test constructed casually may not serve our purpose and relying on the outcomes of such tests would be useless and sometimes harmful for students' learning.

What are the contents of a test? A test comprises of information regarding

- the testing event (like Annual, Terminal, Half-yearly or Monthly, untitled),

- the class for which it is meant,

- the total time duration (usually in hours) for giving complete response to the test,

- the maximum/full marks on the test, and

- the test items, commonly known as questions as the major portion of the body of the test.

Do you know why questions are called items?

Let us examine some examples of test items given below:

1. What is the name of the capital city of Bangladesh?

2. Give three reasons for the outbreak of cholera.

3. 'Poverty is not the only reason for high illiteracy rate'.   Justify.

4. The longest river flowing in India is _____ .

You will notice that statement (1) is in question form, (2) is an affirmative sentence, (3) is a negative sentence and (4) is an incomplete sentence. All these are not in question form but they do serve the purpose of testing. Each is therefore called a test item.

Depending on the types of items, there are different categories of test as given below.

- *Objective Test –* Each item of this testis of objective type (which is described in Section. 15.3   of this unit).

- *Essay Test –* Each of the items in this test is either an extended response type or a restricted response type (described in Section. 15.3 of this unit).

  Again, the tests ate of *three types* based on the mode of response to the items in the test:

- *Oral Test –* Answer to each item of such a test is given orally. Such types of items are very often used in beginning years of primary schools and also when a quick estimate of students understanding of a concept is need to be checked.

- *Written Test –* Answer to each item of the test is given in writing and is also called the paper-pencil test. Everyone is familiar with the written tests as it can be used in nearly all occasions.

- *Performance Test –* When answer to each item requires the student to do some activities like measuring length, weight and capacity, drawing figures, painting, arranging the blocks to produce desired designs, preparing models etc. Development of understanding, skills and creativity can be assessed using this type of test.

Sometimes, different types of items are also used in a single achievement test. In such a test, items of one type are placed together in separate section within the test. During construction of the test we decide about the inclusion of different types of items in the test. Let us think regarding the ways to construct a good test.

Notes

E3. Ms.Aditi was teaching the concept of 'conservation of energy' in classVII. While teaching she felt that some students were looking confused. She wanted a quick check of the students' understanding of the concept. Which type of test should she use for the purpose?

Constructing a Good Test: When would you consider the test you are using to be good? Ms.Nandita, teaching in upper primary classes, thinks that a good test should serve the intended purposes of learning the subject/unit/topic, while her colleague Mr.Prakash is of the opinion that the test is good if there is no ambiguity in the test items and are clear for each student. Another teacher Amin feels the test to be good if it can be scored without any bias and the results can be easily and meaningfully explained to the students and their parents. What Ms.Nandita, Mr.Prakash and Mr. Amin thinks are the characteristics of a good test for the teacher who uses the test. Therefore, a test must be constructed meticulously so that it would fulfil the characteristics of a good test.

E4. Write four characteristics of a good teacher-made test.

Constructing a good test requires the following steps:

Planning, Writing the test items, Assembling and Editing the items, and Making the Scoring Processes.

A good test requires adequate and extensive planning. The *planning process* gives answer to the following questions such as:

- What does the teacher want to do(i.e. Why the teacher want to use a test?).

- Why is the test being administered (i.e. it implies the purposes of the test such as judging the student's mastery of certain essential skills and knowledge, ranking students on the basis of achievement, diagnosing the student's difficulties etc.).

- What are to be tested(i.e. specifying the content to be covered, listing the major unit objective, defining the objectives, etc.)?

For *writing the test items*, the teacher has to prepare a table of specification (normally called as a *blue print* i.e. a two-way arrangement of course content and course objectives). Look at the table of specification for a unit on Oxygen in science for class-VII given below:

Table of specifications for a unit on Oxygen in Science for class-VII.

Objectives

Content	knowledge	understanding	application	skill	total
Physical Properties	8	6	6	0	20
Chemical properties	12	9	9	0	30
Preparation	0	4	0	6	10
Use	16	11	9	4	40
Total	36	30	24	10	100

To prepare good items, the teacher need to know the subject matter thoroughly, know and understand the students to be tested, be familiar with various types of items and follow a table of specifications.

After the test items are written they are *edited* by reviewing each item on the basis of its appropriateness, usefulness, clarity to do the task, language, etc.

Preparing a scoring process along with the test item contributes to develop a good test. A scoring key is required to be prepared and made available with the teacher to help him/her at the time of scoring.

15.2.2 Unit Test

We know that in order to make the teaching-learning easier each subject for a particular class is divided into some units or topics. Each unit consists of inter-linked concepts. Though the concepts within different units are related with each other yet for convenience every unit is regarded as independent. After the learning-teaching of that unit, you need to know the extent of attainment of each student with respect to the learning of the concepts of the unit. You may not require the elaborate and long tests for this. What you require is a small test called a *unit test* which can serve your immediate purpose.

For all practical purposes, the unit test is planned considering the amount of content coverage and the expected learning outcomes and time available for it (approximately 30 minutes). If the study units are found to be too small, then after completion of 2 or 3 units, one unit test covering the units may be conducted. Similarly, for relatively bigger units more than one unit test may be planned.

Purposes of Unit Test:

- The annual and half yearly tests are normally term end summative assessment and used for purpose of promotion to the next higher class. These tests are conducted taking the content of the whole syllabus and often not possible to cover all the competencies. The unit test on the other hand is useful in assessing more competencies if administered frequently.

Notes

- The Unit test is a type of formative assessment. It provides feedback which leads to students recognizing their learning difficulties. It also helps the teacher to modify his/her teaching methodologies and planning for alternate learning experiences for the students who have learning difficulties.

- A unit test usually covers limited competencies and is conducted in a lesser time in comparison to other summative tests. Normally the unit tests are conducted in one period of 30-40 minutes duration. So it does not affect other activities of the class and school in the date of conduct of unit test.

Think of other purposes of unit test. Share your ideas with your friends and note down those purposes. The unit test is different from other as shown in the following Box.

Box: Features of Unit Test

- It is based on limited competencies/specific objectives.

- Testing students with it is very informal in nature i.e. unit testing is conducted within the normal classroom time without affecting other activities of the school.

- The maximum marks for a unit test is decided by the teacher. Marks secured on the unit test are less important than the diagnosis of strengths and weaknesses of students.

- The teacher also decides the time to answer the questions, total number of items to be included in the test. It is purely a teacher made test.

- Varieties of test items (oral, written, performance) can be used in the unit test. But within a single unit test types of items are limited.

- It does not rank the students on the basis of their performance rather it acts as a tool for further learning.

- As it is conducted in an informal environment, it reduces the stress of examination in the students.

E 4. Which of the followings is associated with a unit test?

    (a)   Summative assessment

    (b)   Formative in nature

    (c)   Confined to limited number of competencies

    (d)   Totally controlled by the teacher

    (e)   Standardized achievement tests

    (f)   Decides promotion to the next higher class

(g)   Used for remedial purpose

(h)   Results shared with the parents

The principles of constructing a unit test are the same as those followed in preparing a full length test. However, following are to be noted:

-   The Unit tests cover limited contents/courses.

-   The table of specification that needs to be followed (Blue Print) reflects the content areas in one axis whereas types of questions (oral, written and practical/performance type of items) on the other axis related to the instructional objectives (knowledge, understanding, application and skills).

-   Limited number of questions which can be answered within a particular period has to be framed by the teacher.

-   After preparation of the items on each content area, the teacher may arrange them systematically and then administer the test to the students in an informal atmosphere.

-   The scoring pattern can be discussed with the students and finalized after the testing is over.

Observe and analyse the blue print given below:

Content/language skills	oral	written	performance	Total
Reading with understanding		1(3)		3
Speaking fluently on the text	1(3)		3	
Comprehension		3(2)	6	
Functional grammar	1(5)	5		
Use of language in other context		2(2)	4	
Project work on the topic			1(4)	4
Total	6	15	4	25

Blue Print for a topic in Language for Class V

This blue print is prepared for preparing a unit test in a topic on prose in 1st language (mothertongue). The number outside the parentheses (bracket) indicates the no of items whereas the number within the bracket indicates the weightage of each item. In the unit test oral, written and performance type of items are used. In one side the content/language skills are arranged whereas in the horizontal line the types of questions are arranged.

> **⚒ ACTIVITY1:**
>
> *Take any topic on prose from Class-V textbook of your State. Prepare a test on the basis of the blue print given above.*

15.3 CONSTRUCTION OF DIFFERENT TYPES OF TEST ITEMS

Given below are three test items. Read them carefully.

1.   *What are the factors that affect the population growth of a locality?*

2.   *Name any three characteristics of the living beings.*

3.   *What is the name of the capital city of India?*

Have you noticed any difference between the three test items given above?

In the first item the student has to describe the factors contributing to growth of population in detail. Such type of question is termed as ***essay item***. Essay items are of two types based on the amount of freedom of responses allowed to the students. An essay item that requires a lot of description is termed as an *extended response type item* (item no 1 in the above example). But, in the second item above, the student has to write only three characteristics of the living beings. Such type of question is known as *restricted response type item*. The third item on the other hand requires definite answer and thus named as *objective type of item*. Let us understand different types of test items in this section.

15.4.1 Extended- Response Type of Item

For understanding this type of item let us do the following Activity:

Notes

ACTIVITY: 2

Read the following questions:

1. *Describe the preparation of Carbon dioxide gas in the laboratory.*

2. *Criticize or defend the statement-"Aurangzeb's administrative policy led to the fall of Mogul Empire in India."*

3. *Write any two physical properties of hydrogen gas.*

On the basis of the above three questions, fill in the following table-(put a tick mark if that statement is applicable for that statement or put a cross mark if that is not applicable for that statement.

Table -15.3

Sl. no	Statement	Question 1	Question 2	Question 3
1.	Allows freedom to respond.			
2.	Guessing is minimum while answering			
3.	Measures ability to give several possible answers.			
4.	Enables the child to organize the ideas and present it in a written form.			
5.	Requires much time to answer the question.			
6.	The creative ability of the student is reflected in the answer.			
7.	Scoring may vary from examiner to examiner.			

If you analyse the three items given above and your answers in Table 15.3, you will observe that the nature of item 1 and 2 are quite different from item 3. While the earlier two items are extended (free) response type, the latter is a restricted response type of test item.

In the extended–response type of items, the students are given sufficient freedom in responding to the items. Such type of items permit students to decide which facts they think are most pertinent and to select their own style of organization. Thus, such items help the students to organize complex behaviours, and skills.

Notes

It also helps the teacher in evaluating complex skills like organization of ideas, analytical skill along with understanding of concepts and principles.

Though the extended response types of items have much strength, they also have weaknesses. These responses are difficult to score objectively because the students have greater freedom of expression. The scoring depends on the examiner's own criteria of assessment and mood. For these reasons, different examiners give different scores to the same answer of such an item. There is a very little scope to cover all the expected learning outcomes in a test containing only extended response type of items.

E 5.   State any two strengths and two weaknesses of extended response type of test items with suitable examples.

E 6.   Give two examples of extended response type of test items from each school subject.

The classroom teacher can construct good quality of extended type of test items and use them for further learning of the students. While constructing such type of items the following may be considered:

●   Specify the length of response for each question.

●   Provide the student with some guidelines such as the points to focus in the answer.

●   Provide prior information to the students regarding the weight to different points in the answer.

15.3.2 Restricted Response Type Items

When we put any restriction on an essay item, such that the response to is controlled or become brief, the item generated is a *restricted response item*.

Read carefully the following items:

1.   *Describe your feelings towards your pet animal in 50 words.*

2.   *State any two advantages of television in comparison to radio.*

3.   *Explain the factors responsible for poverty in India (in five sentences).*

4.   *State the reasons of your absence from the school in the space provided below.*

5.   *Answer the following questions as quickly as possible (not more than 2 minutes per question):*

    a)   *During which months of the year, your state experiences monsoon?*

b)   What is a rain shadow area?

c)   Why do you feel colder as you climb higher on a hill?

You can observe that restrictions have been stated in these items to shorten and make responses more focused:

-    In the Item 1 and 3, the length of response is restricted to 50 words and five sentences respectively. So the student has to select, organize and integrate the ideas within the specified number of words or sentences.

-    In the Item 2, the content of response is restricted to stating two advantages of television over radio although there are more points of differences between the two.

-    In the Item 4, the space for response is restricted by 4 lines. The student has to state the reasons within these four lines as given in the question-cum-answer sheet.

-    In the Item.5,   the duration or time of response is limited to 2 minutes per question.

Though there are freedoms for the students to express themselves, the responses are restricted. Such restrictive types of items are useful in managing time, and more objectively scoring of the responses. When carefully constructed, the restricted response items can also be the tools for measuring higher order of learning outcomes like comprehension, application, analysis, synthesis, appreciation, and creativity.

E7. In assessing learning outcomes, state three advantages of extended response type items compared to other types of items.

E8. Give three reasons of different scoring by examiners in extended response type of items.

E9. How many restrictions can be imposed to make essay items restricted response items?

15.3.3 Objective Type Items

Read the following items:

1.   *Find the value of 7 +6 -3.*

2.   *Who was the first Prime Minister of Independent India?*

3.   *India got independence in the year _____.*

We are very familiar with such type of items. These types of items are normally used in most of the tests. The answers to such items are definite and unique and

Notes

hence can be scored objectively. Because such an item can be scored objectively (not influenced by any subjective personal criteria of the respondent or examiners), it is called an *objective item*.

Objective tests present students with a highly structured task that limits their response to supply a word, a number, a symbol or to select the answer from among the given number of alternatives. In general, objective type of items take less time to answer and easier to score uniquely than the extended or restricted response types of items.

Usually different types of objective items are used in the teacher made tests like unit tests. It is necessary for you to have a clear idea about different objective type of items.

Consider the following test items:

1.   *Fill in the blank with correct answer:*

     The members of the Gram Panchayat are elected for _____years.

2.   *Choose the correct answer from within the bracket- (3, 4, 5, 6)*

     The members of the Gram Panchayat are elected for _____years.

Is there any difference in Item 1 and Item 2?

Well in item 1, the student has to supply the answer by recalling from the text. But in item 2, he/she is supposed to select the correct answer from the given alternatives within the bracket. So while the first one is a *supply type of item,* the latter one is a *selection type of item.*

Let us discuss *different objective types of item* with appropriate examples.

(a) Short answer type:

The short answer test items are suitable for measuring a wide variety of relatively simple learning outcomes. These test items are commonly termed as direct questions. Here are some examples:

-    *What device is used to measure the amount of rainfall?*

-    *If 10 numbers of pens costs 45 rupees, then how much you will pay to purchase one pen?*

-    *In which year the First Panipat War was fought?*

In order to respond to the questions given above the student has to recall the facts. The short answer types of items are commonly used to assess the student's knowledge on terminology, facts, and principles. It is very easy on the part of the teacher to frame short answer type of questions. While preparing such type of

Notes

test items one should be careful about the use of language and the arrangement of words in a sentence to avoid ambiguity.

(b) Completion type:

In some test items the students have to complete the incomplete statement. This is another form of the short answer type of item. Here are some examples:.

-   *A Member of Parliament in India is elected for a term of _____ years.*

-   *The process of food preparation by plants is known as _____.*

-   *Each angle of an isosceles triangle measures _____.*

In each item given above are of supply type of items where the students have to supply the correct answer to complete the incomplete statement. Usually one blank space is kept in one item and preferably towards the last part of the sentence. No blank space is to be placed at the beginning of the sentence. You should not, as a rule, use long and complex sentences for these items.

(c) True-false or alternate response items:

Note the following test items:

Read each statement carefully. Circle T if the statement is true and circle F if the statement is false.

- *The square root of 169 is 13.*	*T*	*F*
- *The Second World War ended in the year 1939.*	*T*	*F*
- *Every square is a rectangle but every rectangle is not a square.*	*T*	*F*
- *The author of the book "Wings of Fire" is Dr Man Mohan Singh.* *T*		*F*

Here the student judges the truth or falsity of the statement. The other forms of true-false item are right-wrong, yes-no. Since the choice of response is restricted to only two responses, the respondent has minimum choice and is forced to choose either of the two. That is why this type of items is also called *forced choice type*. Testing for factual knowledge, understanding, application, skill and problem solving ability can be done through this type of item and are found to be useful for the young students. But it is also highly prone to guessing and can be scored quickly, reliably and objectively.

ACTIVITY 3:

Construct at least 10 numbers of true-false items from one chapter of the social science text book.

Notes

After completing the above activity of constructing 10 true-false items, verify the items as per the criteria given below:

a. Is each item expressed in clear, simple language?

b. Did you use the textbook languages?

c. Have specific determiners, like 'all', 'many', 'sometimes', 'usually', and 'always', been avoided in the statements?

d. Have you taken partly true and partly false statements?

e. Do the statements have any double negative words?

f. Is there approximately equal number of true and false items?

g. Is each item clearly true or false?

h. Are the lengths of all the items nearly equal?

i. Are the directions to the students clear?

While constructing true-false items, you should ensure the criteria as stated in a), f), g), h) and i) and avoid the negative criteria stated in b), c), d), and e).

(d) Multiple Choice Items:

Note the following item.

Which one of the following numbers is a square number?

    A.   *2*

    B.   *4*

    C.   *6*

    D.   *10*

Now try to answer the questions below:

- In which aspect this item is different from the true-false item?

- Is it a better form of item than a true-false item? Why?

- Have you used this type of item in your class to test the students learning progress?

The item is a multiple choice item and you might have seen such type of items in the textbooks. Such an item has the following;

- It consists of a problem (called *'stem'*) and a list of possible solutions (called *'alternatives'*, 'options' or 'choices').The correct alternative is the *answer* and remaining alternatives are called *distracters*.

- The problem may be stated as a direct question, complete or an incomplete statement. Examples of each are given below

Notes

Direct question form :	*Complete statement form*	*Incomplete statement form*
In which year India got independence?	Name the year when India got independence.	India got independence in the year_____
A. 1857	A. 1857	A. 1857
B. 1919	B. 1919	B. 1919
C. 1947	C. 1947	C. 1947
D. 1950	D. 1950	D. 1950

In the above example 1947 is the answer whereas 1857, 1919 and 1950 are the distracters.

In place of one correct answer you may use the best answer type of multiple choice items. The following example can help you to understand this.

Which one of the following factors is given consideration when selecting a city for a state capital?

A. *Population*

B. *Availability of market*

C. *Climate*

D. *Location*

Note that all the alternatives are correct, but the option at (D) seems to be the best answer.

As a practicing teacher you need to know how to prepare multiple choice type items. Here are some suggestions.

The stem should be meaningful and should present a definite problem.

Compare the two examples given in the table.

Example-1	*Example-2*
Delhi A. is situated on the bank of the river Ganga B. is the capital city of India C. is famous for Qutab Minar D. has ulingual culture.	The capital city of India is A. Mumbai B. Chennai C. Chandigarh D. Delhi

Notes

What do you observe in both the examples? Which one is the better item and why?

Well in Example-1, the stem does not convey the requirement for response and makes little sense until the alternatives are read. The essence of the problem is not explicit in the stem. .

The distracters should be plausible and in some way related to the problem posed in the stem of the item.

Compare two examples given below:

Poor item	Better item
Which of the following scientists invented radio? A. Marconi B. Isaac Newton C. Bell D. Pasteur	Which of the following scientists invented radio? A. Marconi B. Bell C. Samuel Morse D. Edison

Why is the item in the left hand side a poor item? Have you observed the quality of options in both the items?

Well the item in the left side of the box has four options out of which Pasteur is a scientist associated with medicine. Newton is also not associated with communication. When two options are not acting as distracters, there is greater chance of choosing the correct answer from the rest two. The student without knowing the correct answer may guess the right answer and get the mark. So in a better multiple choice item every option should appear to be a correct answer to the student who is not confident of the right answer.

C.   An item should contain only one correct answer or clearly the best answer.

D.   *Avoid giving irrelevant clues to the students.* This will lead students to choose the correct answer even if they do not know the answer. The clue will enable the students to identify the answer. Look at the examples given below.

Poor item	Better item
Bipin reached the school at 11am instead of the right time at 10am. He was late by an A. 30 minutes C. hour B. 45 minutes C. two hours	Bipin reached the school at 11am instead of the right time at 10am. He was late by A. 30 minutes C. an hour B. 45 minutes C. two hours

Observe, in the item given in the left hand side contains a clue in the stem of the item. The term 'an' provides clue for choosing the right answer i.e. hour. But in the better item, such type of clue is not given.

E. *Consider providing an "I do not know" option.* Such types of items are quite useful for the teacher during the instructional process to enable the children to reflect.

F. *Try to avoid overlapping options* as those may confuse the students to choose the right answer. Consider the following item:

The average rainfall of India in the month of July is

A. *less than120mm*

B. *less than 140mm*

C. *between 140mm and 150mm*

D. *more than 150mm*

E. *more than 155mm*

If 'A' is correct, then 'B' must also be correct. Similarly, if 'E' is correct, then 'D' must be correct. Such confusion needs to be avoided during the preparation of multiple choices of items.

✖ ACTIVITY 4:

Prepare 5 multiple choice items in any topic in mathematics, each with 4 or 5 options.

After the finalization verify each item separately with the checklist given below. You will be able to know whether the item is a better one or not.

Check list for verification

1.	Has the item been clearly presented?	Yes	No
2.	Is the main problem in the stem?	Yes	No
3.	Is the stem free from irrelevant material?	Yes	No
4.	Are the alternatives grammatically consistent with the stem?	Yes	No
5.	Are the alternatives brief and free from unnecessary words?	Yes	No
6.	Is there only one correct or clearly best answer?	Yes	No
7.	Are the items free of clues to the answers?	Yes	No

Notes

Notes

8. Are the numerical alternatives in numerical order?   Yes   No

9. Are the alternatives homogenous?   Yes   No

On the basis of your verification, you may now modify the items improving their quality.

(e)   Matching Type Items:

ACTIVITY 5:

Two matching exercises are given below, identify which one is better? Write your answer giving reasons for your choice.

Matching Exercise-1: Match column 'A' with column 'B'.

Column A	Column B
Bihar	Sun temple
Tamil Nadu	Patna
Rajasthan	Pongal festival
Orissa	Thar Desert

Matching Exercise-2: There are the names of the states in column 'A' and the capital cities in column 'B'. Match the states in Column A with their respective capitals in Column 'B'.

Column A	Column B
Bihar	Bhubaneswar
Orissa	Chennai
Rajasthan	Itanagar
Tamil Nadu	Jaipur
	Patna
	Raipur

Matching item is basically a multiple choice test in which the respondent associates an item with one of several choices in the second column. Such type of test is easy to construct and score. When the learning outcomes emphasizes on the ability to identify the relationship between two things, a matching exercise seems to be most appropriate.

Definitely you will find Exercise 2 to be a better one because of the following points. The directions given are clear and complete to enable students to take the task without any problem by using homogenous (of similar characteristics) options and items in both the columns. In the exercise, Column A contains the names of four states of India and Column B contains the names of the capitals of the states. You can easily observe that in Exercise -1 although the Column A has homogenous items, those in Column B are not which makes it a poor item. Similar exercises can be given in any subject area like word and their antonyms, verbs and their past tense forms, mathematical terms and their formulae, nations and their currency etc. Thus to make the exercise an efficient method of measuring achievement the following must be there:

Notes

- Homogenous options

- Arrangement of options and items alphabetically in their respective columns.

- Unequal no of items in both the columns to eliminate the process of guessing by students.

- The options are placed in the same page which will help the students to find the answers without much difficulty.

You may add more points to the list to prepare better quality matching items.

15.3.4 Open ended Items

You have already learnt about different types of objective type of items and the procedure to frame such items. You are aware that, objective type item has unique and definite answer. However, can you measure all the aspects of the student through an objective type of item? Can the range of thinking of the student and his/her interest for learning be measured with the help of an objective type of item?

Well it is not impossible but difficult. Now look at the following two items:

Item no 1:The cost price (CP) of an object is 500 rupees and it was sold at 600 rupees. Find out the profit.

Item no 2:An object was sold with a profit of 100 rupees. Can you find the cost price (CP) and selling price (SP) of that object?

Item no 1 is an objective type of item having a definite answer (here 100 rupees). But for item no 2 there is no definite answer. One student may say CP is 400 rupees and SP is 500 rupees, while another student may say CP is 450 rupees and SP is 550 rupees, and you can get a lot of correct answers. This type of item is known as *open ended item* which can have a large number of correct answers or sometimes no limited number of correct answers.

Notes

The objective type items or such other items which have definite or fixed number of correct answers are called *closed-ended items*. You can observe the differences between the closed-ended and open-ended items from the examples given below.

Closed-ended Items	Open-ended Items
1. Fill up the blank in 5+—— = 9	1. Which numbers when added give 9?
2. Write the word by suffixing 'ing' to play.	2. Write down as many words adding 'ing' like playing, looking etc.
3. Draw a triangle with two adjacent sides of 5cm and 9cm with measure of included angle to be 60^0.	3. How many ways can you draw a triangle?
4. Which is the main material used in building pucca houses besides cement and mortar?	4. How many ways can you use a brick?
5. Who controls the teachers and students in a school?	5. If you were the headmaster what would you do to improve your school?

Hence we can say:

-   In objective type of item, there is a chance of guessing. The students may guess the answer from the given options. In that case, though the child has not acquired the concept but he/she can manage to get full credit for that item. But in case of open ended items there is a little chance of guessing. If the child has not understood the concept then he/she cannot give the answer. Thus, open ended items avoid guessing.

-   Open ended items as a tool expects understanding of the problem by the student. It helps in measuring the understanding of the student. It also promotes divergent thinking (encouraging more number of solutions to one problem). The child can think about the answers from different angles.

-   As discussed earlier in unit 1, learning is a meaning making activity. Open ended items create scope for assessing whether the student is able to draw meaning of a concept. It is difficult to measure it through objective type of items. If the child is able to give multiple answers to an open ended item, we may say that s/he is able to make meaning.

-   Open ended items eliminate the effects of rote learning.

-   Open ended items encourage and create a scope for better learning at the early years of schooling. Young children may not give correct answer to the objective type of items, because they have very little attention span. They

cannot focus for a long time to one type of activity. But in the open ended items, the children can focus on the question and its multiple answers which lead to further learning.

- The objective type of item is characterized by definite answer. Unable to give correct response to that item discourages the student for further learning and reduces his/her learn ability. On the contrary, the open ended items give a sense of success because there is multiple numbers of correct answers and there is possibility to give at least one correct answer by the student.

E8. Some statements are given below. Read them carefully. Put tick mark against the correct statements and cross mark against the incorrect statements

a) Extended response type of item is an essay type of item

b) Objective type of items is more preferable in measuring the creative ability of the students.

c) 5+2=____, is a selection type of item.

d) Every supply type of item can be converted to selection type of item.

e) Matching type of item is a form of multiple choice types.

f) In a multiple choice type of item, the incorrect options are known as stem.

15.4 CONSTRUCTION AND USE OF QUALITATATIVE TOOLS AND TECHNIQUES

Situation 1: Mr. Samir teaches Mathematics in primary classes. During the course of teaching he observes the children as to how they respond to different questions, whether they have genuine interest towards mathematics learning, whether they are performing the mathematical projects and assignments in time and properly. Besides, he administers a test to assess whether the children have understood the concepts which were taught.

As you learnt earlier, assessment/evaluation of learning is based on both the qualitative and quantitative description of a child's performance. To know the status of the quality and quantity aspect of the child's performance the classroom teacher has to use various types of tools and strategies. Let us discuss this with the help of the following situation:

In the above example, instead of using the achievement test only, the mathematics teacher used various modes of assessment like use of a test, observation during the course of teaching, project works and assignments relating to those concepts. These tools and techniques yield mostly qualitative results. You might have realized that all information about the behaviour of the children cannot be gathered

Notes

by using tests or any single tool or method. The student's performance in both the scholastic and co-scholastic areas can be comprehensively evaluated by tools and techniques combining both quantitative and qualitative information.

15.4.1 Observation

In course of your teaching and doing other activities with children in your school you might have experienced several peculiar natures of children which you do not get to know from any tests. You might have observed how children behave in and out of classroom, how they interact with other children, their areas of interest, their likes and dislikes, their emotional states and other such information all of which can help you to assess the progress and hindrances in their learning in addition to the information from the tests.

Systematically observing students in natural setting (also in simulated setting) is a useful technique for gathering data about student's performance in different curricular and co-curricular activities and about their affective behaviour. Student's progress and behaviour in areas like speaking, handwriting, singing, dancing, dramatization, punctuality, effective use of time, cordial relationship, giving respect to the elders cannot be evaluated through paper-pencil tests. These can be assessed through observation techniques. An observational technique implies the use of a particular observational tool such as check list, rating scale or anecdotal record. According to Lehmann, (1999), the process of observing and recording an individual's behaviour is what is meant by the term observational technique

You can observe your students from a very close quarter through participating or collaborating with them as their equal in their activities (*participant observation*) or you can observe them from a distance when they are busy in several activities individually or in groups (*non-participant observation*). You can *observe* them in action *directly* when the students are aware of being observed or *indirectly* when students are not aware of being observed. Observations can also be *purposive* (done intentionally with a definite plan) or *incidental* (chance observations of peculiar behaviours). But, frequent observation, either directly or indirectly of student's work provides continuous feedback about the learning progress of the student. You can detect errors or problems at right time and take corrective measures to overcome them.

Given below are some suggestions for effective observation which is more scientific and valid:

● Plan well in advance what is to be observed and prepare an observational list.

● Do not take more behaviour for a single observation, take only one or two.

● Use clear and unambiguous terms in the observation tools.

● Carefully record and summarize the observation immediately otherwise there is a chance of forgetting.

● Incidentally when you observe some peculiar behaviour, try to record it immediately and later include it in your plan for further observation to check whether the behaviour was accidental or not.

15.4.2 Check List

The behaviour of the students differs in different situations. The teacher's observation and record of the behaviour of a particular student plays an important role in evaluation procedure. Check list is a tool which helps the teacher to record the student's performance in specific activities. Check list usually contain list of behaviours, characteristics that are either present or absent.

Activities	*Put tick mark if done correctly*
1. Collection of required instruments	————————
2. Taking a piece of white paper	————————
3. Sharpening the pencil	————————
4. Correct use of the instruments	————————
5. Performing construction stepwise	————————
6. Naming of the geometrical figure	————————
7. Any other (Please specify)	————————

A checklist to record the student's performance in performing geometrical construction is given below:

The checklist enables to note the presence of an event, behaviour, characteristics of a student by marking tick mark in the column meant for that behaviour trait. After filling the check list, you can use it for planning the modification of your strategy facilitating for better learning. The particular checklist allows the teacher to check the skills in which the student need further training, characteristics of student's behaviour. If you are using such a check list for observing group behaviour, then you have to look for the activities of the majority members of the group and try to note the behaviour of the deviants along with the observed behaviours included in your checklist.

ACTIVITY 5:

Prepare a two separate check lists to record the cleanliness habit of Grade I and Grade IV students respectively. Administer the respective tool to 10 students of each grade.

The check list is useful for you in a variety of ways. These can be adopted for a number of purposes according to the need of the students/ teachers and class. Learning outcome which involve process and personal social development can be easily evaluated by recording evidences of growth in respect of specific learning outcomes. In evaluating the processes which can be divided into a series of clearly defined, distinct and specific actions, checklists are most useful. Check list is also very easy to prepare and simple to use.

15.4.3 Rating Scale

Sometimes you may be facing some queries about the performance of your students from different quarters. The parent may be asking, *"Is my child showing interest in games?"*, *"Does she dance well*?", "What about the overall performance of my son in Science?"

The Headmaster might be enquiring, *"Are you satisfied in the cleanliness habits of students in your class?", "How was Sunita's exhibits in the interschool science exhibition appreciated by the visitors?"* And so on.

How do you reply to such queries?

Usually our responses are in qualitative terms like *'just average', 'excellent', 'above average', 'satisfactory'* etc. In other words, we are rating the attributes in a scale ranging from extremely negative level 'poor', or 'unsatisfactory' to extremely high level, 'excellent', or 'highly satisfactory' etc. In brief, we are rating the performances or attributes in a rating scale, without being much aware of it.

A rating scale is an instrument that requires the rather to assign the rated object that has numerals assigned to them. Rating scale resemble checklist, but it is used when finer descriptions are needed. In check list what do you do? You merely indicate the presence or absence of a characteristic through a checklist. But in a rating scale you have to indicate the status or level of quality of what is being rated. Look at the two tools given below.

TOOL-1(Check list on participation of a student in school activities)

Activities   ***put a tick mark if the student is active.***

1. Student is active in class projects.   _____

2. The student relates to his peers.   _____

3. The student participates in group discussion. _____

4. Student is active in sports activities.   _____

5. Student is active in club activities.   _____

TOOL-2 *(rating scale on participation of a student in school activities)*

Please encircle the number on the right of each question indicating the level of active involvement of the student as per your observation and judgment.

1- Unsatisfactory, 2- Below average,   3-Average, 4- Above average,
5- Outstanding

1. Student is active in class projects.	*1*	*2*	*3*	*4*	*5*
2. The student relates to his peers.	*1*	*2*	*3*	*4*	*5*
3. The student participates in group discussion.	*1*	*2*	*3*	*4*	*5*
4. Student is active in sports activities.	*1*	*2*	*3*	*4*	*5*
5. Student is active in club activities.	*1*	*2*	*3*	*4*	*5*

What differences do you observe between the two tools? In which way a rating scale is different from a check list? Which gives more qualitative description of student behaviour?

Well the above rating scale is a 5-point scale, where the student's behaviour is rated as outstanding(5), above average(4), average(3), below average(2),and unsatisfactory(1). Similarly you can also prepare 3-point rating scales. The qualitative descriptions can be quantified by encircling the appropriate number signifying the emphasis given by the cater on the behaviour of the student.

15.4.4 Questionnaire

To assess various traits of student behaviour, a questionnaire found to be effective. Consider the limitation of interview as discussed earlier. Interviewing a large number of respondents is time consuming and need a lot of labour. On the other hand, a questionnaire is a viable alternative to save time and energy. At a time a large number of respondents can give information through a questionnaire. In a questionnaire, some items on the issue/topic are placed in a written form. The

Notes

respondents have to answer the questions. The questions should be such that those elicit facts and not opinions. The facts or information provided as the response to questions can be verified or cross checked. Analysing the answers we can arrive at appropriate and valid conclusions. For example, information about the engagements of children in learning activities at home and the type and frequency of support provided by the family after school hours can be elicited through a well prepared questionnaire.

A Questionnaire is useful in providing adequate, accurate, unbiased data as required. On the basis of the objective and purposes of information, the items (questions) for a questionnaire are developed. Then the questionnaire is administered to the respondents. It may be kept in mind that the respondents should be made aware that their responses will be kept anonymous. After that, the data collected are analysed.

15.4.5 Interview

Interview is an effective technique to collect information directly by face to face personal conversation with some specific purpose. When we need to find the reason for a particular behaviour in the student, asking him/her personally is the best way to elicit. The confidence, which the student carry of his /her teacher, will help the teacher in getting correct information. Depending upon the nature of the task, the interviewer can ask open-ended or closed ended questions to the students. The information received through the interview should be carefully recorded for arriving at a conclusion. Prior to the interview, the interviewer should prepare an interview schedule to record the information. The interview schedule helps the interviewer to focus on the points. Structured questions might simplify the categorization and summarization of responses; they might also restrict what the subject is permitted to say. But on the other side, unstructured interviews allow the respondent more freedom. Interviews are quite useful in questioning young children and illiterates. While interviewing a respondent the following precautions may be taken into consideration:

- Ask such questions which will satisfy your purpose.

- Allow time for the respondent to answer.

- Try to build trust and confidence in the respondent.

- Make rapport with the respondent, this will ensure stability of the interview.

- Bring clarity in the questions.

Interview allows probing and clarification of the respondents' position, but it is expensive and time-consuming, because interview is done with one individual at a time in a face-to-face manner.

15.4.6 Portfolio

A student portfolio is a collection of pieces of student's work selected to serve a particular purpose. It not only contains the works of the student but also the best works of the students. Student's portfolios are often used as an effective instrument for assessing the students.

Portfolios can serve as an effective tool in fostering skills in self- evaluation which leads to independent thinking. When the students create, collect some extraordinary work it is kept in their portfolio. The students may be asked to include some form of self -evaluation and thoughtful reflection on each entry in their portfolio. By this, the portfolios provide students with opportunity to show what they can do with reflection and self- evaluation. The portfolio of all the students can be displayed in a regular interval by the teachers in presence of all the students, parents and teachers. This creates an opportunity for further learning as well as involvement of parents in the school activities. It provides a platform for discussion on the student's strength and the positive aspect of their personality. The strengths of portfolio are given below in the box:

Strength of Portfolio

- *Develops skill among students in evaluating the strength and weakness of their own work.*

- *Helps students to take responsibility for setting goals and evaluating their progress.*

- *Creates opportunity to collaborate and reflect on students' progress*

- *Gives concrete examples of student's development over time as well as their current skills.*

- *Creates opportunity for parents to assess the performance of their children.*

While using portfolio for both learning and evaluation purposes the teacher has to specify the purpose, provide guideline for selection of portfolio entries, define student's role in selection and self-evaluation, specify the evaluation criteria and use portfolios in instruction and communication.

Portfolio of work collected over a period of time (for a term or the entire school year) can be particularly effective for purposes of formative evaluation. For example, from the collection of creative writing of the students for a period of time(say 6 months), the teacher can assess the progress of students in grammar, organization of ideas and their progressive development over that period of time. The students may also evaluate their works along with their teacher jointly by developing evaluation criteria. Thus, it can be concluded that the portfolios can

Notes

be integrated with the classroom instruction; used for developing self- evaluation skills, and through activity the students take the responsibility of their own learning.

> **✖ ACTIVITY 6:**
>
> *Devise a portfolio to use in assessing student progress in science experiment in the grade you are teaching.*

15.4.7 Project

Projects are quite useful in establishing a link between the knowledge inside the textbook and the life of the students. According to Ballard, "A project is a bit of real life that has been imparted into the school". Project work in different school subjects creates avenues for learning of higher order skills like constructive and creative thinking. In project, a problem is posed to the students and they find solution to it. The projects can be undertaken either by individual student or by students in small groups. Example of a project is given below:

> *Seasonal variation in the bird population- place where they are found, how they fly (direct, gliding, dipping etc), description of their body (size, shape, colour, parts of the body etc), gait, call, food and food habits, nest, eggs (number, size, colour) etc.*

Similarly projects on beautification of school campus, plants in the neighbourhood, survey of the local industries can be carried out by the students. Conducting a project involves various activities like choosing a project, planning for it, executing, evaluating and recording.

Projects can act as an effective technique for evaluation of student's behaviour in both scholastic and co-scholastic areas. It helps the teacher to get information about the student's ability in applying the knowledge in different situations. Besides, it enables the teacher to know the student's skill in recording the data, analysis of the data, documentation of the project. The student can also assess his/her own performance in those areas. Personal traits like sincerity, neatness in doing a work, adoption of systematic procedure, working in group situation can also be evaluated with the help of projects.

> **✖ ACTIVITY 7:**
>
> *Prepare a list of 10 projects which are suitable for the students of the class where you are teaching.*

15.4.8 Case study

Case studies are in-depth investigation of an individual, a family, a school, or a group of children. In education, case studies are typically conducted to determine the background, environment, and characteristics of children with problems. By gathering pertinent data about the present status, past experience and other related incidents, we can develop understanding of the present behaviour and performance of a problem child like a truant, slow student, aggressive or depressed child. The qualitative analysis of these data is helpful in constructing a comprehensive and integrated picture of the case. In case study approach, the investigator (teacher) collects data from a particular individual and confine their interest to that individual as a unique case or collect data from a small group of individuals, which form a unit for in-depth study.

Case studies can be vertical (collecting information about the child over a long period of time) or may be horizontal or cross sectional (Collecting information of recent period from all possible sources about the child).

However, subjective bias is a constant threat to objective data gathering and analysis techniques. The investigator should be thoroughly familiar with the skills which are associated with the conduct of case-studies. To conduct a case study the following steps may be followed:

- Determining the present status of the cases- this can be done by direct observation. You may take the help of any type of test; consult with the parents, peers to get information about the child.

- Determine the most probable antecedents- this information helps in formulating workable hypotheses.

- Verification of antecedents

- Diagnosis of the causes and planning for remedial measures in the light of the causes.

- Follow-up of the cases.

- As an effective technique, case study gives information about the case in identifying the problems and plan for strategic development.

✖ ACTIVITY 8:

Identify one or two student who is irregular in attending your school. Consult their parents, peers to get information. Find out the causes of such type of behaviour. Develop strategies to check such unwanted activities. Write a report on that case.

Notes

Notes

Case study helps the teacher to develop appropriate strategies for addressing the problems of the child who create hindrances in his/her learning. This enables the teacher to have a comprehensive assessment of the case.

15.5 LET US SUM UP

- Achievement test is quite useful in measuring the learning acquisition by particular student in different subjects. Based upon the nature of learning outcome and content measured, quality of test item, procedure of administering and scoring and interpretation the teacher- made tests are prepared.

- According to the modes of response, three types of test items such as oral, written and performance based (practical works) can be developed and used. The classroom teacher while preparing the teacher made tests should use all types of items.

- Unit test is basically a teacher made test which is formative in nature. The unit test is informally conducted by the teacher. It provides credible feedback to the teacher regarding his/her teaching methodologies as well as to the students regarding his/her learning progress and difficulties. Further it is used for remediation and enrichment purposes.

- The test items are classified under two broad headings-essay type and objective type. The essay types of items are extended response type and restricted response type.

- Different types of objective types of items like short answer type, multiple choice type, matching type, alternate response type etc. can be used by the teacher.

- Open ended items are quite useful to discourage cramming and enabling the student for divergent thinking.

- Evaluation techniques like observation, interview, case study, and portfolio are quite useful for assessing behavioural traits of the student. For that, tool like observation schedule, interview schedule, check list, rating scale and questionnaire can be used.

15.6 MODEL ANSWERS TO CHECK YOUR PROGRESS

E1. Achievement tests are useful in knowing to what extent the student has acquired knowledge and skill in a particular topic, comparing the achievement among students regarding the acquisition of knowledge. It further helps the teacher to group children, diagnose individual learning difficulties etc.

E2. Oral questions

E3. A. good teacher made test should cover limited no of competencies

B. should be able to identify leaning difficulties of the pupils.

C. can contain variety of items

E4. The statements in (b), (c), (d), (g) and (h) are associated with unit test.

E5. A variety of different mental processes and skills can be measured by the extended response type of items. It permits the teacher to assess the extent to which the student is able to compose an answer and present in an effective way. Such types of items are easy to prepare in comparison to the restricted response type of item.

E6. Teachers with varied content knowledge, scoring on the basis of handwriting by some examiner, too much emphasis on grammar and spelling by the examiner etc are some reasons for different among examiner in scoring extended response type of items.

E7. Mainly four types of restrictions are normally imposed. Those are restriction I length of response, content of response, space for response and duration of response.

E8. a. √   b. ×   c. ×   d. √   e. √   f. ×

15.7 SUGGESTED READINGS AND REFERENCES

1. Deale, R. N.(1975), Assessment and Testing in the secondary School, Evans/ Methuen Educational, London

2. Gronlund, N.E. and Linn, R. L. (2000), Measurement and Assessment In Teaching, Pearson Education, Singapore

3. Lehmann, I. J. and Mehrens, W. A. (1991), Measurement and Evaluation in Education and Psychology, Harcourt Brace College Publishers,USA

15.8 UNIT END EXERCISES

1. Prepare a specification for an oral or performance test by stating the abilities which are to be tested, and outline the test material needed.

2. Prepare a unit test for any subject. Use oral, written and performance type of items in it.

3. Develop a sheet for portfolio entry in language development. The sheet may contain detailed entry about the portfolio, space for the student why s/he selected that portfolio, date of entry, special feature of the portfolio, teachers comment on strong point and something to consider or areas needing work for. Ask your students to fill up the sheet on the basis of their portfolio.

UNIT 16 USING THE RESULTS OF ASSESSMENT FOR IMPROVING LEARNING

STRUCTURE

16.0 INTRODUCTION

You have learnt in Unit-14 that assessment seeks to support and improve child's learning and development. You have also learnt the use of different tools and techniques to collect varied information on the progress of each of your students in the scholastic and co-scholastic areas in Unit 15. These results on the performance and progress of each student are either in the form of number or quantity (like scores or marks) or in qualitative terms (like descriptive statements). The data and evidence so collected have to be recorded and classified to analyse the performance of students from different angles of students' growth and reported to different stakeholders differently in order to facilitate students' learning and take suitable measures for enhancing their learning level at respective end. These recorded evidences of changes and progress of the students are also used to improve the on-going learning-teaching processes and to modify the plan of teaching. In this unit, let us discuss 'what', 'why' and 'how' of recording and

reporting assessment results in different curricular and co-curricular areas, and how to plan follow-up programmes based on the analysis of assessment records for furthering students' learning.

At least 8 hours of study will be required for completion of this unit.

16.1 LEARNING OBJECTIVES

After completing this unit, you will be able to:

● Describe the need and processes for recording and reporting of the learning performance of students in different scholastic and co-scholastic areas;

● Use the assessment results to identify individual needs and learning requirements of the students and take follow-up action so as to bring improvement in students' learning;

● Share the assessment results with different stakeholders for their appropriate support in the learning of students;

● Reflect on the assessment results to refine your own strategy of teaching and assessment so as to enhance students' learning.

16.2 RECORDING AND REPORTING OF ASSESS-MENT RESULTS

Whenever you conduct an examination, what do you do with the answer scripts? You give marks on the answers and determine the total marks obtained by each student on each subject. Then enter these marks on a register against the names of the individual students. This marks register is a permanent record kept for future use. After recording the marks in the register, progress cards for each student is prepared and issued to each student for his/her information and perusal by his/her parents. In some schools, parent-teacher meeting is held after each examination to share the results of the students in the examination. Recording and reporting of student's performance (mostly on written responses) in scholastic areas (i.e. in subjects included in the prescribed syllabus) are the familiar and continuing practices in our schools.

But with the emphasis on continuous and comprehensive evaluation, the assessment is no more confined only to the scholastic areas. In order to assess the individual students holistically, all the scholastic and co-scholastic areas are being included in the assessment programmes which has been already discussed in detail in previous units. It is hence evident that the dimensions of recording have to increase with the widening of the dimensions of assessment of students' performance in both scholastic and co-scholastic areas. Similarly, reporting the

Notes

recorded results to several stakeholders has also become quite a challenging job. Let us discuss the different forms of recording and reporting and their implications.

16.2.1 Need for Recording and Reporting

Once you have the information and evidence of students' learning progress in different scholastic, co-scholastic activities and socio-personal qualities collected from various sources through different methods, they are recorded systematically. This is done subject wise and term wise over a period. To ensure all-round development of every learner to his/her potential, recording of evidences of students' performance in the scholastic and co-scholastic areas is very important in Continuous and Comprehensive Evaluation (CCE). These records of students' learning performance serve a variety of specific functions in the school.

> *Recording: The process of systematic documentation of evidences of students' learning performance and progress in both scholastic and co-scholastic areas gathered by using various tools and techniques of assessment is called recording.*
>
> *Reporting: Communicating and sharing feedback on assessment to show how a child learns and progresses from a lower level of understanding and skill acquisition to higher and more complex levels of learning over time is called reporting.*

The records of students' learning performance can be best described in relation to the users of the reports who include (i) students and parents, (ii) teachers and counsellors, and (iii) planners and administrators.

(i) Students and Parents

Let us see how recording and reporting help the students and their parents.

- It clarifies the objectives of the school programme. The student gets to know what they are doing and why they are doing. The parents also get to know what the child is doing in the school and the agenda of the school behind a particular school activity.

- It indicates students' strength and weakness in learning. For example, a student may be strong in Mathematics but he/she may be weak in the Language subject or he/she may be strong in games and sports but weak in scholastic areas, etc. This would give scope to students and parents to work on the weak areas.

- It promotes greater understanding of the student's personal and social development. For example, a child who is shy may be given opportunity to open-up in a debate class.

- It contributes to student's motivation. When the student sees his/her achievement and success he/she feels charged up to improve his/her performance. There can't be any better incentive than success. It has to be ensured that the records contain enough strong points of the student to cheer about which would motivate him/her and also helps his/her parents to contribute to maintain his/her motivational level.

Notes

(ii) Teachers and Counsellors

The learning performance record helps the teachers and counsellors to provide varied information collected to understand the potential of the students. On the basis of available evidence, they can draw conclusion about how a student is learning and/or progressing. It is necessary for them to understand 'where the student is?', and 'what needs to be done to help the student?' so that they can lift the child to the level where he/she should be according to age and ability.

The analysis and review of records on periodic basis help the teacher to reflect on

- the teaching strategies and methods,
- classroom management, and
- use of materials and resources available inside and outside school so as to improve upon his/her performance.

On the other hand a counsellor (somebody may be officially there or a teacher can also assume the role of the counsellor) can address the roadblocks in learning performance if any, on account of personal problems in a face to face situation to ensure student's progress. A system of recording and reporting, if it is comprehensive and diagnostic, can guide student's learning effectively, aid in their personal-social development and help in realistic educational planning.

(iii) Planners and Administrators

The recording also serves the following purpose to the planners and administrators.

- monitor the quality of education imparted across levels starting from cluster to district,
- examine the effectiveness of inputs and interventions,
- classify and categorize schools for upgrading the quality of learning,
- assess teacher performance to make teachers accountable for their performance, and
- undertake state-wide reforms in the areas like curriculum development and teacher education.

Notes

Since recording and reporting constitute an integral part of assessment, reporting needs to be spelt out clearly. Whatever has been recorded must be based on evidence and data and needs to be shared. The sharing needs to be of preventive, proactive, progressive and corrective type instead of fault finding. The purpose is to accept the child as s/he is, taking responsibility of his/her progress and seeking the assistance of others for the progress so that it prevents the child from falling behind. While reporting it has to be made clear as to who will do what to increase the learning performance of children. Based on the functions of recording; reporting has to be different for different stakeholders. Each stakeholder has some action points for him/her. For example, if a child is untidy, the parents may be reported that the child would cope better with his/her friends if he/she comes to school with clean dress and combed hair. If a child is found avoiding English class, then there may be something in the report for the English teacher concerned to give personal attention to the child. Instead of making the report uniform for all, it may be thought how it can be flexible enough to report individual strength and weakness.

The timing of reporting is very important from the point of view of students' learning. The assessment record must be shared with the students immediately after the assessment particularly in the scholastic areas so that they get immediate feedback. However, the assessment record may be shared with the parents at the end of each term. The assessment record needs to be brought to the notice of the Headmaster when he/she is engaged in academic planning at the beginning of the session. The subject teacher must get the record immediately to initiate corrective or enrichment activities for his/her students. The profile containing assessment data needs to be transferred when the student leaves school or gets admission elsewhere along with his/her movement.

E1 State one implication of reporting for each of the following:

Students, teachers, and parents.

16.2.2 Process of Recording Learning Progress

Reporting through traditional marking system is not good enough to understand the child and to further his/her learning. A simple score of 45 in English does not give an idea of how well a student has done on a test administered on him/her. Without certain other information it is not possible to give meaning to that score and draw relevant conclusions. A score, therefore, must not be interpreted just on the basis of a raw score. A score of 45 obtained by Sofy in English means, she has not done well in this subject. To understand this better , do the following activity.

ACTIVITY -1

Let us consider the information on Sofy's performance in English given below.

- *That the highest score normally secured in the subject is 70.*

- *That the highest score obtained by a student in that class is 53.*

- *That the lowest score in the class is 12.*

- *That the average score of the class is 27.*

- *That only 7% of the students in her class scored more marks than 45.*

- *Sofy has secured 36 marks in English in the previous examination.*

- *Sofy is regular in attending English classes.*

- *Sofy has a liking for the subject English.*

Draw your conclusions on Sofy's performance in English.

Notes

Thus, recording and reporting of assessment data becomes complete and meaningful when it includes the previous performance, assessment of both scholastic and co-scholastic components, performance indicators and the like. While recording the results of different assessment of your students, you need to take note of the following points:

- Recording has to be done individually.

- Recording format would vary depending on the type of data and the way it is generated.

- Recording will be done objectively based on evidence.

- While recording qualitative data, the description has to be precisely stated without being too general.

- Use very simple language without any jargon so as to be easily and clearly understood by all the stakeholders.

- Recording has to be done with positive and helping mindset to enhance learning level of student. Recording should not be an exercise of fault finding.

- Recorded data have to be shared with different stakeholders to provide appropriate support at their level.

- The assessment data need to be recorded in such a manner that action points for different stakeholders emerge clearly from the recorded data.

Let's design a Performance Report Card for recording the achievements of students of Classes VI-VIII.

Performance indicators have to be clearly mentioned in the Performance Report Card. It may be in the form of a 5-point rating scale as follows for the scholastic areas:

Grade A	80% and above	Excellent
Grade B	65% - 79%	Very Good
Grade C	50% - 64%	Good
Grade D	35% - 49%	Average
Grade E	Below 35%	Needs special care

For co-scholastic and co-curricular areas, it may be in the form of a 3-point rating scale such as;

Grade A	Very Good
Grade B	Good
Grade C	Needs further care

Student's Performance Report Card

A. Student's Profile

Name of the Learner: _____

Name of the School:_____

Class: _____   Section: _____ Roll No._____ Year: _____

B. Performance in the Scholastic Areas

Sl. No	Subject	Term - I Marks/Grades				Term - II Marks/Grades				Term - III Marks/Grades			
		O	W	P	T	O	W	P	T	O	W	P	T
1	Lang.1												
2	Lang.2												
3	Lang.3												
4	Math.												
5	Gen Sc												
6	S. Sc.												

N.B: _O – Oral, W – Written, P – Project/Practical/Assignment & T – Total_

A. Performance in the Co-scholastic Areas

Sl. No	Co-scholastic Areas	Grade Term I	Grade Term II	Grade Term III
1	Art Education			
2	Work Experience			
3	Health and Physical Education			

Notes

B. Personal-Social Qualities

Sl. No	Personal-Social Qualities	Grade Term I	Grade Term II	Grade Term III
1.				
2.				
3.				
4.				
5.				

N.B. 5 Personal-Social Qualities may be chosen out of cleanliness, co-operation, punctuality/regularity, discipline and obedience, emotional stability, initiative, responsibility, diligence, environmental awareness, tolerance, appreciation of good qualities, leadership, truthfulness, patriotism, social service, civic sense, dignity of manual labour, respect for elders, protection of environment and protection of cultural heritage.

E. Co-curricular Activities

Sl. No	Co-curricular Activities	Grade Term I	Grade Term II	Grade Term III
1	Literary(reading, recitation, debate, creative writing)			
2	Scientific(club activities, nature study, computer literacy)			
3.	Artistic(drawing. Painting, embroidery, craft, sculpture)			
4.	Cultural(music, performing art)			
5.	Physical(indoor, outdoor, yogic exercise)			

Notes

6.	Miscellaneous (first-aid, red cross, scouting, N.C.C., adventure activities)			

C. Attendance

Term I		Term II		Term III	
No. of Working Days	Attended	No. of Working Days	Attended	No. of Working Days	Attended

G. Remarks

Sl. No	Remarks of	Remarks on:	Term I	Term II	Term III
1.	Class Teacher	Strength			
		Areas of improvement			
2.	Head-Master/ Principal	Strength			
		Areas of improvement			
3.	Parents	Strength			
		Areas of improvement			

H. Signature

Parents   **Class-teacher**   **HM / Principal**

ACTIVITY -2

Can the performance of the student be recorded as per the format suggested above? Is it a ready to use format? If not, what modification would you like to do taking into consideration the local needs?

In Report Card for Classes VI – VIII discussed above, you might have noticed that, the Report Card captures assessment data subject-wise over a period of three terms under scholastic areas with reference to three dimensions only (Oral, Written and Project/Practical/Assignment). But, if you, as a teacher, are keen to raise the learning level of a particular student in your subject which you are teaching, it will not serve your purpose. You have to identify a list of indicators of learning outcomes of the subject and observe at least 3-5 children each day and keep a brief record in your register. By the end of the month, you have some

observations about each student of your class. This would help you in making a quarterly progress report in your subject. This process may enable you to identify the subject specific strength and weakness of the learner.

Notes

E-2 State any four differences in the process of recording progress of students in different curricular and co-curricular areas and point out the reasons for variation in the process.

Here is an example of a detailed list of indicators for Environmental Studies (EVS) taught from Classes III – V. By the time children complete primary school their abilities and concepts need to develop along the following indicators which may be rated through a 3-point scale (1, 2, 3) where 1 means requiring support, 2 means good, and 3 means very good..

Recording learning performance in EVS for Class – V

Sl. No	Dimensions	Indicators	Term-wise Rating		
			Term I	*Term II*	*Term III*
1	Observation and Recording	Using the sense to gather information Observing an object, an event or a phenomenon			
		Identifying differences between similar objects/event			
		Identifying similarities between different objects/ events.			
		Noticing greater details			
		Recognizing the order of events that take place in a sequence.			
		Reporting and narrating an event or process; oral and written presentations.			
		Reading pictures, maps and tables; with gradually increasing complexity			
2.	Discussion	Listening to others' ideas and opinions.			
		Expressing one's thoughts / ideas / opinions in a group			

Notes

		Repeating and responding to others' ideas and opinions			
		Openness to accept feedback from others and appreciating that others may have a different point of view			
		Reviewing one's thoughts and ideas depending on feedback from others			
		Finding out from other people, even strangers outside school .			
3	Expression	Expressing verbally			
		Expressing oneself through gestures/ body language; sculpting in clay			
		Expressing through drawings.			
		Understanding that making a drawing of a place is different from making a symbolic map; developing the basic ability to draw simple maps.			
		Expressing one's own ideas and thoughts through creative writing			
4.	Explanation	Formulating one's own reasoning for an observed event/activity.			
		Thinking critically about one's own reasoning.			
		Making logical connections.			
		Making simple hypotheses – to explain observations or relationships in terms of a principle or concept.			
		Recognizing that there can be more than one possible explanation of an event/ activity.			
		Recognizing the need to test explanations by gathering more evidence.			

		Using evidence or patterns to make a prediction (as different from a guess, which needs no evidence)			
5	Classification	Identifying a group of objects on the basis of observable characteristics. Identifying differences/contrasts in groups of objects.			
		Identifying similarities in groups of objects.			
		Grouping the objects on the basis of one variable at a time.			
6	Questioning	Asking questions to get information about objects, events and people			
		Raising critical questions that help deeper analysis			
		Asking questions based on hypotheses.			
		Identifying questions which can be answered by their own investigations			
		Recognizing that some questions cannot be answered by inquiry			
7	Analysis	Defining the situation/event in their own language			
		Identifying/predicting possible causes of any event/phenomenon			
		Checking evidences which does not fit into the pattern of findings			
		Treating every conclusion as being open to challenge by new evidence, and changing ideas when a different one makes better sense of evidence			
		Making inferences based on evidence gained by experience/experiments.			

Notes

8	Experimen-tation	Handling things or equipment with care – individually and in a group			
		Doing activities individually and in a group through systemic steps			
		Showing respect and care for living beings			
		Showing concern for minimum wastage of materials; trying to reuse and recycle			
		Using standard or non-standard measures in making comparisons and taking readings			
		Improving and creating new things on their own			
9	Concern for Justice and Equality Co-operation	Being respective to the views of children from different life experience/cultures.			
		Being sensitive towards others who may be disadvantaged and differently-abled.			
		Conscious of inequalities in the family and society; being able to reflect and question.			
		Having a strong sense of justice and being ready to act for a just cause.			
10	Cooperation	Accepting one's own strengths and weaknesses			
		Appreciating other's view points			
		Taking initiatives/ responsibility in conducting collective work			
		Sharing and working with others; being considerate and helpful towards others			

Notes

Recording learning performance in Language for Class – V

Language learning means acquisition of four language skills i.e. Listening, Speaking, Reading and Writing. Therefore, you may use the same 3-point scale as used in rating the indicators in EVS to record the abilities under each competence over a period of three terms on the basis of his/her day-to-day class-room observation.

Sl. No.	Points of Assessment	Indicators	Term-wise Rating		
			Term I	Term II	Term III
1.	Listening	Listens to and understands a range of oral texts (e.g., a class lecture, TV/Radio news broadcast, announcements, debates, instructions etc.)			
		Can transcribe sentences and passages dictated by the teacher.			
2	Speaking	Recognizes/identifies key words and phrases.			
		Can make inferences and predictions.			
		Can summarize main points in an oral text.			
		Provides responses, makes judgements and draws conclusions			
		Makes use of different intonations.			
		Shares experiences, observations and ideas during structured group talks.			
		Can express and respond to opinions and ideas clearly, concisely and accurately.			
		Can support own opinions, conclusions, etc. with examples.			
		Can carry out conversations on day-to-day matters			
3.	Reading	Reads a range of grade appropriate texts both orally and silently.			

		Uses prior knowledge, experience and information in various contexts			
.		Can use dictionary or encyclopaedia			
		Can initially respond to the text.			
		Understands and appreciates articles, poems, reports, etc.			
4.	Writing	Can write letters, descriptions; prepare posters, notices; and write messages.			
		Can provide sufficient details, examples and facts to support main points			
		Organizes ideas in appropriate sequence			

✖ ACTIVITY -3

Develop a format for recording the performance of Class – III students on a 3-point scale taking into consideration the local variation.

Recording learning performance in Mathematics for Class – III

In Mathematics, usually a process-based assessment is done. You have to observe students' work carefully. Any problem in Mathematics is to be divided into small steps. Each step involves a process. A student needs to be recognized and credited for successful completion of each process. Based on this approach, each problem is to be assessed and categorized under three grades i.e. 1, 2, and 3 which refer to:

Grade 1: A student can't successfully complete even a part of the process.

Grade 2: A student can partly complete the entire process.

Grade 3: A student can successfully complete the entire process.

However, at a time as a teacher you need to keep the record of 4-5 students. An example of a format of recording for a student of Class – III is presented as follows-

Sl. No	Topic	Term I			Term II			Term III		
		Class Work	Assign-ment	Practical	Class Work	Assign-ment	Practical	Class Work	Assign-ment	Practical
1.	Shapes & Design									
2.	Number reading & writing									
3.	Addition									
4	Subtraction									
5	Time									
6	Calendar									
7	Weight									
8	Money									
9	Volume									
10	Multiplication									
11	Division									
12	Data Handling									

✖ ACTIVITY -4

Develop a format of recording in Mathematics for a child of Class V taking into consideration the competencies expected for the subject and the local variations.

The subject teacher needs to fill in the grade level in blank space. The information so recorded may be shared with the pupils and parents with positive remarks.

E3. Point out the differences in the formats of recording learning performance in different subject areas with reasons.

16.2.3 Reporting to Different Stakeholders

The recorded results need to be shared with different stakeholders as feedback so that each stakeholder can contribute to learner's progress in his own way. This sharing is called *reporting* which is a factual presentation of students' learning progress. This is always proactive and more focused on students' strength. Reporting takes various forms depending on our expectation from the stakeholders. For example, the Headmaster may need the performance of a class

Notes

as a whole; whereas a teacher may like to know the performance of a child in the particular subject he/she is teaching. The child may like to know the exact topic where he/she is falling behind the group. The parents may like to know personal-social qualities of their wards. The different needs and uses of the reports of student's performances by various stakeholders have been discussed earlier in sec. 16.3.1 of this unit.

16.3 USING ASSESSMENT RESULTS FOR IMPROVING LEARNING

16.3.1 Analysing Assessment Results to Identify Strengths and Weaknesses

Once you duly fill in the record and make it ready for sharing with stakeholders, you may critically analyse the data recorded therein. You may do it in different ways;

(i) Subject-wise analysis,

(ii) Topic-wise analysis,

(iii) Learning outcome wise analysis, and

(iv) Term-wise analysis.

Some examples of analysis are given below:

Table 1 Subject-wise Analysis

Sl.No.	Subjects	Marks obtained by different students						
		A	B	C	D	E	F	G
1	Language (F.M:100)	41	10	40	50	44	38	48
2	Mathematics(F.M:100)	64	28	80	70	66	69	68
3	EVS (F.M.:100)	58	23	64	22	59	56	75

Let's examine the above Table1 showing results of students. The following conclusions may be drawn from it.

- The class as a whole is weak in Language as almost everybody got less than 50% marks.

- Performance of students in Language is poorer than that of Mathematics and EVS.

- Students have done well in Mathematics, but could have done still better.

- Student 'C' has done very well in Mathematics and EVS, but has not done fairly in Language.

- Student 'B' has done poorly in all the subjects.

- The difficulty level of the test items in Language needs to be analysed.

Table 2 Topic-wise Analysis

Name of the Topics:1._____2_____ 3_____

F.M. – 50

Students	*Topic 1*	*Topic 2*	*Topic 3*
A	40	25	10
B	37	30	8
C	30	23	5
D	42	30	15
E	32	29	11

From the above table, we may draw the following conclusions:

- All the students have done very well in Topic – 1.

- All the students have done poorly in Topic – 3.

- Difficulty level of the test items prepared on Topic – 3 need to be analyzed.

- Student 'D' has done very well in all the subjects in the group but could have still done better in Topic – 3.

- Student 'C' has not been able to do fairly in all the three topics.

Table 3 Learning Outcome wise Analysis

Objective: Comprehension

Students	Marks obtained in different specifications under Comprehension (out of 50 in each specification)					
	Translates	Cites examples	Sees relationship	Compares	Classifies	Interprets
A	35	33	5	10	58	5
B	44	34	6	8	10	6
C	43	33	8	9	12	5
D	42	35	10	13	10	8
E	38	26	5	8	5	4

Notes

From the above table, we may draw the following conclusions:

- Students have done well in learning outcomes related to translating and citing examples.

- Students have done very poorly in learning outcomes related to interpreting and seeing relationship.

- Students have done marginally in learning outcomes related to comparing and clarifying, which can be further improved.

- Overall learning performance of 'D' is the best in the group, whereas the overall performance of 'E' is the worst in the group in outcomes related to comprehension.

- Student 'B' has not been able to repeat his performance in outcome related to translating in other areas.

Thus, many conclusions can be drawn to analyse the learning performance of individual student as well as a group of students.

The strength and weakness of the students can also be analysed for further course of action. Here is an example.

Table 4 Term-wise Analysis

Students	Term I			Term II			Term III		
	Lang. (F.M.-100)	Math. (F.M.-100)	EVS (F.M.-100)	Lang (F.M.-100)	Math. (F.M.-100)	EVS (F.M.-100)	Lang (F.M.-100)	Math. (F.M.-100)	EVS (F.M.-100)
A	50	40	60	55	40	62	60	38	64
B	40	80	45	45	85	55	42	90	60
C	70	90	75	75	95	80	80	98	82
D	78	82	80	80	92	80	80	98	82
E	60	62	38	56	64	40	50	60	45

ACTIVITY -5

Now try to draw your conclusions based on Table – 4.

Hints: Your analysis may be based on (i) whether there is evidence of progress in the learning performance of students as a group and individual students over terms?; (ii) whether there is subject wise progress over terms?; (iii) which subject area shows better progress and which subject area does not show progress?; (iv) which students are consistent in their performance?; and (v) which students are falling behind? (vi) in which area?

Notes

16.3.2 Follow-Up Programmes

Having analysed the learning performance of the students, what will you do as a professional teacher?

You have to take corrective actions in order to help the students to overcome their deficiencies and raise their levels of learning. The corrective action may take the following forms.

- Teacher as a Counsellor

- Remediation of Learning Difficulties

- Enrichment

- Teacher's own Reflection

Teacher as a Counsellor: You have to take the role of a counsellor and may seek answer to the following questions.

- How can I help the child to help himself / herself to reach the target?

- How can s/he remove the roadblocks in his learning?

- What are the different solutions?

In trying to find these you are counselling.

> *Counselling is defined as a unique helping relationship in which the client is provided the opportunity to learn, feel, experience and change in ways that he/she thinks are desirable.*

You need to discuss with each student the mistakes committed by him/her. You need to know whether the mistake has occurred because of some misunderstanding or some carelessness on the student's part. Therefore, you need to give the student another chance to look back into the mistakes and see if he/she can correct some of them on his/her own. Sometimes, students commit mistakes because of slip of pen/forgetting/tiredness/carelessness. In such cases, you can ask the students to identify their own mistakes and get it corrected by them. It can also be done with the help of his/her peers. If students have not learned something, you cannot expect them to correct themselves. Students make errors when they try to do something which they are not yet able to do. That is a case of inadequacies where a teacher has to plan systematic remedial programmes on individual learner basis.

If a student is not motivated and is having adjustment problems, you have to do personal counselling in a face to face mode so that he/she works according to his/her potential. Your attitude has to be professional, encouraging and supportive for such interventions. You need to have full trust and confidence on the ability of the children.

Remediation of Learning Difficulties

Following are four major steps in diagnosis and remediation of learning difficulties:

(i)   determining which pupils are having learning difficulty,

(ii) determining the specific nature of learning difficulty,

(iii) determining the factors causing learning difficulty, and

(iv) applying appropriate remedial procedures.

-   *Determining who is having difficulty*

By analysing students' score subject wise and term wise, you can identify the students having difficulty. Different observational techniques like rating scale, checklist and anecdotal records may also help the process of identification.

-   *Determining specific nature of the learning difficulty*

It is a matter of picking the spot from where the student has slipped. When you take up the learning unit or outcome-wise analysis in a subject area, you can locate the exact spot.

-   *Determining the factors causing the Learning Difficulty*

Learning difficulties can be attributed to improper teaching methods, unsuitable curricular emphasis on complex course materials. If all the students are not doing well in a topic it may be concluded that either the presentation of the content material is difficult or the way in which the content is transmitted is beyond the reach of the students. Sometimes learning difficulty may arise out of factors like attitude, interest, motivation and the like. If a student has negative attitude towards Mathematics and the Mathematics teacher, it may also affect his score in Mathematics adversely. Causes of learning difficulties are multiple and complex. However, special testing, observation of the learners, focused group discussion with the students, interview with them and their parents during Parent Teacher Association meeting may provide information about the learners' deficiency.

-   *Applying Remedial Procedure*

Data generated through testing and assessment can play a vital role in remedial programmes. Those are to be used to (i) clarify to the student the specific type of responses that are expected of him/herby saying "this is how you could have done", (ii) provide diagnostic information about his/her difficulties which needs attention by saying "this is where you are missing and this is what you have to practice", (iii) give the student a feeling of success through the use of a carefully graded series of test exercises. For example if he/she has not mastered subtraction, he/she cannot do division, therefore, give an exercise on subtraction and let

him/her have a feeling of success before giving him exercise on division, (iv) enhance motivation by providing short term goals and immediate knowledge of progress by saying "you could do the exercise on subtraction so quickly and correctly; now you can do problems on division with ease", and (v) provide information concerning the effectiveness of the remedial procedure by saying "you could do this because you started from the scratches and went through this procedure and this is how you could progress", etc.

E5. Distinguish between mistake and error. Cite examples of each from your day-to-day observation of students' homework.

E6. Discuss the steps to be followed by you as a teacher for remediation of learning difficulties faced by the learners in your subject area.

Enrichment

You have to be concerned for the child who is doing well. He/She has to understand that the child doing better can do to the best with his/her abilities. Therefore, you may design higher order learning materials for this child or give him/her higher order learning activities and/or assignments. For example, if an average child is given the task of making a sentence by using a difficult word, the above average child may be asked to make a sentence by using two difficult words. You can increase the level of difficulty of the task to nurture talent.

Teacher's own Reflection

As a teacher, you are required to reflect on your own performance. You may ask the following questions to yourself:

- Have I done enough for each and every student?

- How could I have been different?

- How can I make a difference in the performance of a child or the group of children?

- Can I develop alternative tasks for my children?

- What will be the best tool/technique to assess a particular competency of my students?

The teacher must assess his/her own strategy of teaching and assessment to help the students learn to the best of their capabilities. While doing assessment he/she has to design assignment tasks in such a way that the response is naturally emitted and the students are keen to take the test.

⚒ ACTIVITY-6

Analyse the question paper(s) of your last unit test and state how you could have framed questions in a better manner. An example is given for you.

Questions Asked	Improved Questions
Why do birds migrate?	State any three causes explaining the migration of birds to Chilika lake during winter.

Let us analyze the improved version of the question given in the above example. Here the student is given a definite task to perform. He/she has the liberty to pick up any three causes. The item presents a context. The item is related to assess comprehension level of the student. The response to the item can also be objectively scored.

16.4 LET US SUM UP

● Recording refers to the process of systematic documentation of evidences of students' learning performance and progress in both scholastic and co-scholastic areas gathered by using various tools and techniques of assessment.

● Reporting refers to communicating and sharing feedback on assessment to show how a student learns and progresses from a lower level of understanding and skill acquisition to higher and more complex levels of learning over time.

● The records of student assessment have to be reported differently to different stakeholders like; (i) learners and parents, (ii) teachers and counsellors, and (iii) planners and administrators for required intervention at their end.

● Student's Performance Report Card needs to include the dimensions like; (i) Student's Profile, (ii) Student's performance in the scholastic areas, (iii) Students's performance in the co-scholastic areas, (iv) Student's Personal-Social Qualities, (v) Student's Co-curricular activities, (vii) Student's Attendance, (viii) Remarks of the Class teacher and the Head master/ Principal, and (ix) Overall result of the learner.

● Recording learning performance in EVS may include the dimensions like (i) Observation and recording, (ii) Discussion, (iii) Expression, (iv)

Explanation, (v) Classification, (vi) Questioning, (vii) Analysis, (viii) Experimentation, (ix) Concern for justice and equality, and (x) co-operation.

- Recording learning performance in Language may include basic skills like (i) Listening, (ii) Speaking, (iii) Reading, and (iv)Writing.

- Recording learning performance in Mathematics may include different topics covered in a particular class.

- Assessment results may be analysed, (i) subject-wise, (ii) topic-wise, and (iii) learning outcome wise to take steps for improving student's learning.

- Based on analysis of assessment results the follow-up programmes like counselling, remediation through diagnosis and enrichment programmes may be taken up by the teacher. The teacher may have his/her own reflection on the learning performance of the students and the tools and techniques he/she has used to assess the learning performance.

16.5 MODEL ANSWERS TO CHECK YOUR PROGRESS

E-1. Reporting of learners' assessment is helpful for:

(i) the teachers;

- to understand the potential of the learners from the varied information collected.

- to develop a full profile of the learners.

- to draw conclusion about how a learner is learning and/or progressing.

- to understand 'where the learner is', and 'what needs to be done to help the learner'.

(ii) the parents;

- to know what the child is doing in school.

- to know the child's strength and weakness in learning.

- to motivate the child to go ahead with his /her areas of interest and aptitude.

- to facilitate remedial /enrichment activities for the child as per his/her need.

(iii) the students;

- to promote self motivation for improving their performance.

- to promote personal-social development.

- to know what they are doing and why they are doing. This would give scope to them to work on the weak areas.

E -2. The following differences are observed in the process of recording progress of students in different curricular and co-curricular areas:

- Students' learning progress in different curricular areas is recorded either in terms of marks or grades; but in case of the co-curricular areas it is recorded only in terms of grades.

- Their learning progress in different curricular areas is recorded in terms of marks or grades under the heads of oral, written and practical/project/ assignments separately; but in case of the co-curricular areas it is recorded comprehensively in different aspects like drawing, painting, music etc.

E-3. The following differences are observed in the formats of recording learning performance in different subject areas.

- Recording learning performance in Language includes basic skills like (i) Listening, (ii) Speaking, (iii) Reading, and (iv) Writing.

- Recording learning performance in EVS includes the dimensions like (i) Observation and recording, (ii) Discussion, (iii) Expression, (iv) Explanation, (v) Classification, (vi) Questioning, (vii) Analysis, (viii) Experimentation, (ix) Concern for justice and equality, and (x) co-operation.

- Recording learning performance in Mathematics includes different topics covered in a particular class.

E-4. Errors occur, but mistakes are made. Errors can simply happen, but mistakes involve human actions. An error is a deviation from accuracy or correctness. A mistake is an error caused by a fault: the fault being misjudgement, carelessness, or forgetfulness.

E-5. You, as a teacher, may undergo the following steps for remediation of learning difficulties faced by the learners in your subject area.

- determining which students are having learning difficulty by analyzing their performance subject wise and term wise

- determining the specific nature of learning difficulty through diagnosis

- determining the factors causing learning difficulty such as; attitude, interest, motivation and the like

- applying appropriate remedial procedures

16.6 SUGGESTED READINGS AND REFERENCES

Notes

1. Government of India (1986 & 1992). National Policy on Education, Ministry of Human Resource Development, Department of Education, New Delhi.

2. Government of India (1991). Minimum Levels of Learning at the Primary Stage: Report of the Committee Set Up by Ministry of Human Resource Development, NCERT, New Delhi.

3. Government of India (2005). National Curriculum Framework. Ministry of Human Resource Development, NCERT, New Delhi.

4. Gronlund, N.E. & Linn, R. (1990). Measurement and Evaluation in Teaching (6th Ed.). Macmillan Publishing, New York.

5. Rajput, S. et. Al. (2002). Handbook on Paper Setting. NCERT, New Delhi.

6. Shertzer, B. & Peters, H.J. (1965). Guidance Techniques for Individual Appraisal and Development. Macmillan Company, New York.

7. Singh, P. (1986). Evaluation at the Elementary Stage: A Book of Readings (Ed.), NCERT, New Delhi.

16.7 UNIT END EXERCISES

1. Who are the different stakeholders for reporting student' performance? Describe how they can contribute in improving the learning performance of the learners.

2. Discuss how far the guidelines listed for recording are feasible for the teacher.

3. Explain the steps to be taken by the teachers for improving learning based on the results of assessment.

4. Elaborate the steps for constructing a diagnostic test and develop test items for diagnosing the learning difficulty of the learners in your subject area.