
UNIT 12 BASICS OF ASSESSMENT AND EVALUATION*

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12.1 INTRODUCTION

‘To measure or to learn that is the question.’ (Broadfoot, 1996)

Let us have a look at two different situations.

Class VI A students is divided into five groups. Each group has six students all engaged in last minute preparation for their project presentation. The five teams can be seen making hectic efforts for completing their project for which they will be graded. In another situation, class X students are seen pouring over their books in a desperate effort to perform well in the Board examination.

Both the situations are related to student learning but with a difference. The first situation denotes assessment where each student will be assessed based on their content knowledge, skills of collaboration, communication and innovation by an expert or a teacher. The second situation is related to examination where students will be answering questions to a standardized test which will be evaluated by an external examiner. As you can see the terms measurement, assessment and evaluation are all used in the learning process, but each term has different connotations and implications.

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12.2 OBJECTIVES

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

- define the concept of assessment and evaluation;
- differentiate among measurement, assessment, and evaluation;
- explain assessment and evaluation as a part of the teaching-learning process;
- discuss the relationship between assessment and learning;
- differentiate among Assessment of Learning, Assessment for Learning and Assessment as Learning; and
- explain the term assessment at various levels.

12.3 CONCEPTS OF MEASUREMENT, ASSESSMENT AND EVALUATION

To many, the word “assessment” conjures up images of testing, marks and grades. Assessment is much more than this. But then one needs to know the different terms like, assessment, measurement and evaluation which are used interchangeably but have different connotations. The figure 12.1 shows the relationship among test, measurement, assessment and evaluation.

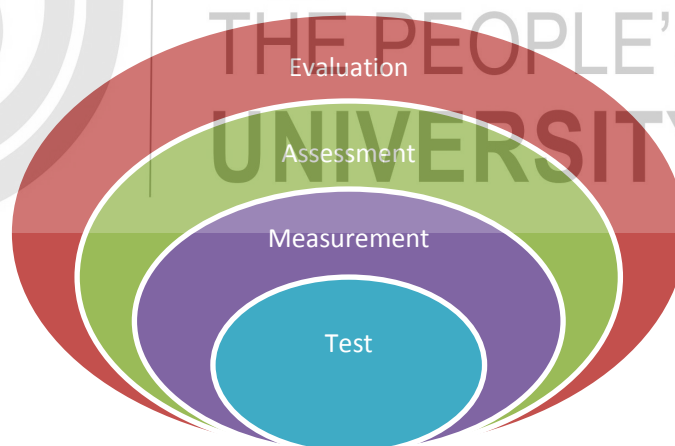


Fig.12.1: Relationship among Test, Measurement, Assessment, and Evaluation

Assessment is involved in everyday lives of learners. Assessment practices have a long history in our country. Discussions and debates were a regular practice to gauge the knowledge of pupils in the ancient Universities of Nalanda and Takshashila. Although there are several forms of assessment within our education system, one of the most visible of these are the formal examinations which is conducted typically at the end of key phases in education. Let us understand the terms measurement, assessment and evaluation in detail.

Measurement

Measurement has been the practice with teachers since a very long time. They have been testing their students and assigning numbers regarding the progress of their students in studies, and adopt corrective measures accordingly. According to Bradfield & Moredock (1957), 'Measurement is the process of assigning symbols to the dimension of phenomenon in order to characterize the status of phenomenon as precisely as possible'. Measurement is the process by which a characteristic of an object, person or activity is perceived and understood on specific standards and is described in standard words, symbols or definite units.

Assessment

The term assessment is gaining importance in the present day, because it is widely accepted that what is taught is assessed using various tools, and that the format of assessment influences the format of learning and teaching. In this Unit, the term assessment is used frequently to describe the basics of assessment practices.

The word 'assess' is derived from the Latin verb 'assidere' meaning 'to sit with'. This implies that it is something we do 'with' and 'for' students and not 'to' students. The importance of assessment cannot be undermined. High-quality assessment is at the very heart of quality education and is the key to raising learning standards. Assessment is invaluable to both the teacher and the taught. It enriches learning, enhances pupil motivation and at the same time enables teachers to reflect on the methods/strategies used and make modification if necessary. To quote Freeman and Lewis (1998), the five main purposes of assessment are "to select, to certify, to describe, to aid learning and to improve teaching" which give a balance to public judgment and personal development.

Some of the advantages of assessment practices are the following:

- Provides valuable data on the breadth and depth of student learning.
- Help to understand what children know and what they can do.
- Act as lens for understanding students' learning by identifying their strength and weaknesses.
- Provide educators, parents, and families with critical information about a child's development and growth. in all developmental areas- cognitive, physical/motor, language, social-emotional, and approaches to learning.
- Determine the needs of students for providing additional support.
- Help teachers to plan specific strategies of instruction for students based on their needs.
- Contribute in improving learning outcomes and promote learning.
- Identify the strengths and weaknesses within a program.

- Facilitate teachers to use the information obtained to modify the teaching learning process and improve pedagogical approaches.
- Facilitate collaboration among parents, teachers and educators to support their child.

As you can see, the purpose of assessment is to gather valid, reliable and useful information about student learning which can be used for monitoring student progress and achievement with respect to learning outcomes and also for taking appropriate measures to facilitate the students to reach the set goals.

Evaluation

Unlike measurement, the concept of evaluation in the educational sector is comparatively new. Often the terms are used interchangeably leading to ambiguity. There are some major differences between the two terms. For e.g. by testing a child in Mathematics by administering a single test based on Algebra we may measure his/her mathematical ability in solving problems in Algebra and nothing else. But through evaluation we may get to know about the interests, abilities etc, of the child in Mathematics as well as his skills, competencies, his/her critical thinking and problem solving abilities also.

In education, **evaluation** is the process of using the measurements gathered in the assessments, analyze and interpret the data obtained and use this information to find out if the objectives of the instruction have been achieved and also use the information so gathered to determine what students know and understand, how far they have progressed and how their scores and progress stand in comparison with other students.

II) Types of assessment

Assessment can be categorized in different ways:

- Formative and Summative assessment
- Formal and Informal Assessment
- Qualitative and Quantitative Assessment
- Direct and Indirect Assessment

Formative Assessment

‘When the cook tastes the soup that’s formative, when the guest tastes that is summative’. This popular quote of Robert Stake sums up the major difference between the two types of assessment –formative vs. summative.

Formative assessment is an integral part of the instructional process with active involvement by students. It provides scope for self and peer assessment besides teacher assessment. Active participation increases students’ motivation to learn and the informal setting and unobtrusive techniques of assessment make learning an enjoyable experience. These type of assessments are carried out during a course of instruction and not confined to end of a

session or course by which continuous feedback is provided to both the teachers and the learners. This facilitates modification or adjustment of the transactional procedures and learning activities.

Types of Formative Assessments

Teacher observations, student record, questioning strategies, self and peer assessments, portfolios, anecdotal records, checklists and rubrics, quizzes and essays, diagnostic test etc. are some of the formative assessments carried out in schools.

Summative Assessment

Summative assessments conducted at the end of a course of learning are the most traditional way of evaluating student work. As the term suggests, it measures or 'sums up' how much a student has learned from the course/semester/unit. It is carried out at intervals or spread out and occur after instruction every few weeks, months, semester or once a year, when achievement has to be summarized. It is usually reported as graded test, marked according to a scale or set of grades. It is a means to measure, at a particular point in time, student learning relative to certain standards. Therefore, to rely solely on summative assessment is not advisable because of its unscientific nature. The overemphasis may also produce enormous stress and anxiety among the learners. To put it simply, formative assessment focuses on improving learning whereas summative assessment summarizes learning. Examples of summative assessment are as follows:

- Mid Term Examination
- End-of-unit or chapter tests
- End-of-term or semester exams

The ideal way is to balance formative and summative assessment so that a clear picture emerges about a student.

Formal and Informal assessment

Data from formal assessments are used to support the conclusions made from the test by using standardized measures. The data is mathematically computed and summarized. Scores such as percentiles, marks or standard scores are most commonly given when this type of assessment administered.

Informal assessments on the other hand are not data driven but rather content and performance driven. For example, a language teacher while assessing the pronunciation of a particular student uses scores such as 10 out of 15 words pronounced correctly, or rubric scores; such as not able to pronounce properly, pronounce properly to some extent, pronounces all words correctly are given from this type of assessment.

Quantitative Assessment

As the term indicates, **quantitative assessment** helps to collect data that can be analyzed using quantitative methods. There is much reliance on numerical scores or ratings. It uses values obtained by using an instrument based on a standardized system. The major limitation is that the data is derived from a selected or predetermined set of possible responses. Quantitative assessment approaches work by the numbers, collecting, analyzing, interpreting, and charting results, trends, and norms and is mainly concerned with scholastic achievement focusing on subject-based performance.

Qualitative Assessment

Unlike quantitative assessment, qualitative assessment does not rely on scores or numbers but on descriptions. It is more concerned with detailed descriptions of situations or performance; therefore, it can be much more subjective but can also be much more valuable in the hands of an experienced teacher. Qualitative is chiefly about evaluating the non-scholastic and mostly all-important aspects of the students personality including social, emotional, attitudinal and moral/ethical.

Apart from these types, there are other methods like direct and indirect methods of assessment. In direct methods of assessment, students are asked to demonstrate their learning while in indirect methods students are made to reflect on their learning. Tests, essays, presentations, etc. are generally direct methods of assessment, and indirect methods include surveys and interviews.

Continuous and Comprehensive Evaluation

Continuous and Comprehensive Evaluation (CCE) was introduced to redesign how assessments are formulated in our country. Under the RTE Act, CCE is envisaged as a programme of continuous evaluation of the student throughout the academic year. The assessment includes both scholastic and co-scholastic aspects thereby allowing for a comprehensive assessment. The Ministry of Education in its advisory on implementation of section 29 of the RTE Act, specifies that CCE should be built around five tools - child's engagement pattern, general observations, observations during group work, and individual work in class, child's written work, and an anecdotal record.

Diagnostic Assessment

Diagnostic assessment is generally used to diagnose the weakness/difficulties faced by a student. Tools are administered prior to instruction which will give a snapshot of what a student knows and modify or plan strategies accordingly. Students are given identical pre- and post-tests before and after the course. This method allows teachers and students to chart their learning progress by comparing pre- and post-tests results.

By now, you must have understood that the type of assessment activity and the way evidence of learning will be gathered are determined on the basis of

various variables like learning outcomes being assessed, the curriculum which is adopted, the teaching- learning activity being conducted, the learning level of students who are assessed, the social context, the learning needs of students, the class, the age group they belong to etc. Hence, ‘one size may not be fit for all.’ Instead a variety of activities may be considered. Also it is recommended that both formal and informal strategies are used for assessment of knowledge and skill from pre-primary to college/university level.

Check Your Progress I

Notes: a) Write your answer in the space provided after each item.

b) Compare your answer with the one given at the end of the unit.

1) List some of the major examination reforms in the recent years.

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2) Why is there a need to consider a variety of activities for assessment?

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3) How is measurement different from evaluation?

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12.4 RELATIONSHIP BETWEEN LEARNING AND ASSESSMENT

“What and how students learn depends to a major extent on how they think they will be assessed.” (John Biggs1999)

The relationship between assessment, teaching and learning is dynamic and interactive. Assessment is an integral part of the teaching- learning process.

Before going into the details, it is worthwhile to understand the process of education. Education is conceptualized as a tri-polar process with its three poles being a) Educational Aims and Objectives b) Learning experiences c) Evaluation. The three are interrelated with mutual synergic, interdependence, and constitute the process of education.

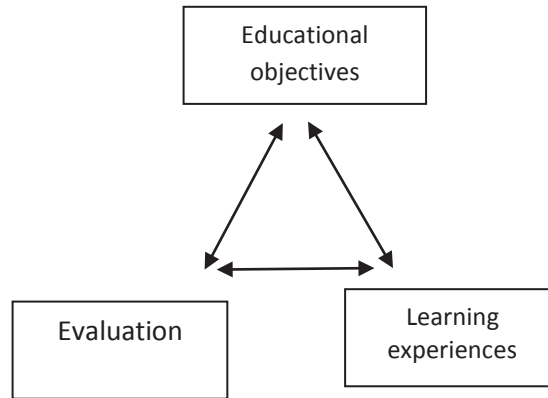


Fig: 12.2: Education as a tripolar process

The process of collecting, examining and using information about what student know and able to do, form the basis of effective teaching-learning process. The appropriate use of tools to gather data/ information, its proper analysis and interpretation contribute to a great extent in enhancing the learning outcomes of students. It plays an important role in the process of learning and motivation. Quality of education imparted in schools or colleges is shaped by the assessment practices administered there. Assessment furnishes the evidence needed to document and validate that meaningful learning has occurred in the classroom. It is vital to ensure whether students have learned what they have been taught, or that the teaching was relevant to the students' learning needs and interests.

The scope of assessment in learning is immense. When the information gathered from assessment is properly analyzed, interpreted and used, it would fetch innumerable benefits for all stakeholders be it the students, parents, teachers or the school authorities. Effective feedback would help build confidence among students and give motivation to make further progress. It helps teachers to modify/adjust their pedagogy and involve students as active participants in their learning. Parents and school authorities would be able to understand the strength and weakness of each student as well as monitor the progress closely. In this way, linking two variables would contribute in enhanced learning and improvement in learning outcomes.

12.5 ASSESSMENT OF LEARNING, ASSESSMENT FOR LEARNING, AND ASSESSMENT AS LEARNING

One question, which often pops up when we talk of assessment, is the assessment for the teacher or the student? This needs to be clarified at the outset. Very often the lack of clarity can lead to wastage of time, energy, and resources— for both the assessor and the assessed. In addition, we need to understand the different types of assessment i.e. assessment of learning, assessment for learning and assessment as learning. These terms are comparatively recent in the context of assessment and are related to the constructivist theory that children are not passive recipients rather they are active participants in the knowledge acquisition process. Central to this view of learning is the role of the teacher from that of a knowledge provider to that of a guide, facilitator and a counsellor.

The difference between assessment of learning and assessment for learning is a matter of function and purpose—a matter of ‘who’; sometimes assessment is conducted merely as a kind of benchmark to see ‘how well students can do’, and then it is an assessment of learning. However, if the same is used for modifying the learning process for improved outcomes then it is considered as assessment for learning. In fact there is significant overlap between the two. The same test given in one situation would be considered an assessment of learning while in another context or situation, it will be assessment for learning. Let us try to understand the characteristic features of each one of them.

Assessment of Learning

The ‘traditional’ reasons for assessment were mainly for communicating results of student achievement by teachers, as well as selecting, sorting and grading students for entry into various programmes. Assessment of learning is the predominant type of assessment in schools for such purposes. The intent of such assessment is to certify learning and report about students’ progress in school. It is used to benchmark students’ learning against criteria (Process/Skills/Learning Indicators and Learning Outcomes) based on identified curricular aims and objectives. It is a way to see what the students can do, mostly summative and usually convey students’ relative position compared to other students.

Assessment of learning in classrooms is typically done at the end of something (e.g., a unit, course, a grade, a key stage, a programme and takes the form of tests or exams that include questions drawn from the material studied during that time). The results are expressed symbolically, generally as marks across several content areas to report to parents. The objective is to provide comprehensive information regarding the extent of student learning. For example, unit test is a commonly used form of assessment of learning.

Even today, this kind of assessment is most prevalent in schools. Teachers shoulder the major responsibility of creating, administering and marking the test. Teachers use the tests to assess the quantity and accuracy of student work, while comparing the performance with other students. The feedback given to the students is in the form of marks or grades with little scope for students to take corrective steps to improve upon their performance. These kinds of testing events would help discern which students are doing well and which ones are not. The efficiency of the assessment depends on its validity and reliability. The test content is generally limited to the prescribed syllabus and the scoring is, too, simplistic that it does not reflect the progress in other areas or skills.

The major features of Assessment of learning are as follows:

- collect evidence of student learning / achievement.
- provide those evidences/feedback to the wider community, including parents, educators and to the students themselves.
- grade /rank etc. on the basis of the assessment scores.
- plan future learning goals for students.

Role of Teacher

Teachers' role is pivotal. Her directedness is paramount in designing learning, collecting evidence, and judging what has been learnt (and what has not). The responsibility of reporting student learning accurately and fairly, also rests on the teacher. There is very little involvement by the students.

Assessment for Learning

The purpose of assessment is constantly changing. It is not restricted to reporting and sorting 'Assessment can improve student learning, teacher effectiveness, and increase the levels of student engagement with the material (Marzano, 2000; McMillan, 2004; Shepard, 2000).' It is widely acknowledged that assessment drives student learning. This type of assessment is **assessment for learning**. It is a type of formative assessment used by teachers to gain an understanding of their students' knowledge and skills and adjust the teaching learning process accordingly. The feedback is not only useful for students but also to the teachers themselves.' It is the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go, and how best to get there .

It is rightly observed that improving the quality of learning in courses involves not just determining to what extent students have mastered course content at the end of the course but also how they have progressed throughout the course. Apart from providing valuable evidence about students' learning, assessment for learning assists students in assessing their own learning. The feedback is useful for both students as well as teachers.

While the learners would be able to diagnose their own learning, teachers, too, would be able to gauge their efficiency and effectiveness and design strategies for improvement. This helps teachers identify the learning gaps of each child, reflect, review and modify their teaching as per the need and learning styles of students. Yet another benefit is that since assessment for learning occurs continuously during teaching-learning process and is based on multiple evidence using multiple sources to collect information. It is used as a range of activities that the child participates in both inside and outside the classroom on all aspects of learning, scholastic as well as co-scholastic.

The main features of Assessment for learning are as follows:

- It is comprehensive as it covers scholastic and co-scholastic aspects, knowledge as well as skills.
- It is holistic in nature.
- It drives student learning and help them to learn better, rather than just achieve better marks or scores.
- It involves increased levels of student autonomy.
- It provides effective feedback throughout the course and not just at the end of the course.
- It is based on the belief that all students can improve.
- It encourages self-assessment and peer-assessment as part of the regular classroom routines.
- It helps teachers to gauge their own efficiency.
- It could be used as an effective tool in the teaching-learning process.

Teachers use focused observations, questioning, conversations, quizzes, computer-based assessments, learning logs, or whatever other methods are likely to give them information that will be useful for their planning and their teaching. Teachers' role is central here also but quite different from the previous approach. S/he is more of a guide and facilitator rather than an assessor.

Assessment as Learning

The teachers' role has been redefined in the present day. From the traditional role of knowledge bearers and keepers, they are now facilitators, mentors, and guides. Learners are becoming more and more self-directed in their search for knowledge. When learners themselves become their own assessors, it is termed as **Assessment as Learning**. There is major involvement by the students as they monitor their own learning, ask questions and use a range of strategies to decide what they know and can do, and how to use assessment information for new learning. This requires providing opportunities and space to students to critically assess, reflect and analyze their own work during the teaching-learning process and identify their strengths and weaknesses.

Assessment as learning is also a formative assessment which focuses on teaching students the metacognitive processes to evaluate their own learning and make adjustments. Students are the critical connectors between assessment and learning. Students become adept at personally monitoring what they are learning, and use what they discover from monitoring to make adjustments, adaptations, and even major changes in their thinking.

The main features of Assessment as learning are as follows:

- Teacher and student together create goals and co-construct learning;
- Encourage students to take responsibility for their own learning;
- Require students to reflect on their learning and plan accordingly;
- Provide ways for students to use formal and informal feedback and self-assessment to help them understand the next step in learning;
- Provide scope for peer assessment; and
- Foster metacognitive skills.

In Table 12.1, a comparison of Assessment of Learning, Assessment for Learning and Assessment as Learning is displayed.

Teacher's Role

Teacher's role though crucial is mostly for guiding the students to assess themselves and make such an environment that students get to work on themselves, take corrective steps for self improvement and acquire metacognitive skills.

In the traditional models, Assessment of learning used to be predominant. But with the changing times, assessment **for** and **as** learning are more widely used. It is recommended to have a balanced model including all three of the types of assessments.

Table: 12.1: Comparison of Assessment of Learning, Assessment for Learning, and Assessment as Learning

Criteria	Assessment of Learning	Assessment for Learning	Assessment as Learning
Why Assess?	To certify or inform parents or others of student's proficiency in relation to curriculum learning outcomes.	To enable teachers to determine next steps in advancing student learning	To guide and provide opportunities for self assessment and identify next steps

Assess what	The extent to which students can apply the key concepts, knowledge, skills, and attitudes related to the curricular outcome	What each student know and do, learning needs of students in relation to the curricular outcome	To find out each student's thinking about his or her learning, and the mechanisms used to adjust and advance learning
What Methods	A range of methods in different modes that assess both product and process	A range of methods in different modes that make students' skills and understanding visible	A range of methods in different modes that elicit students' learning and meta cognitive processes
Using the Information	Indicate each student's level of learning, give reports about student performance that can be used to decide the next steps in a student's learning	Provide each student with accurate descriptive feedback to further his or her learning <ul style="list-style-type: none"> •differentiate instruction • provide descriptive feedback to parents about student learning and ideas for support. 	Provide each student with descriptive feedback that will help to develop independent learning habits <ul style="list-style-type: none"> • provide each student with ideas for adjusting, rethinking, and articulating his or her learning • provide the conditions for the teacher and student to discuss alternatives
Teacher's role	Very crucial role -Reporting student progress accurately	More of a facilitator and guide	Make students independent learners. Help develop metacognitive skills

You can understand the steps of the assessment cycle from the following figure:

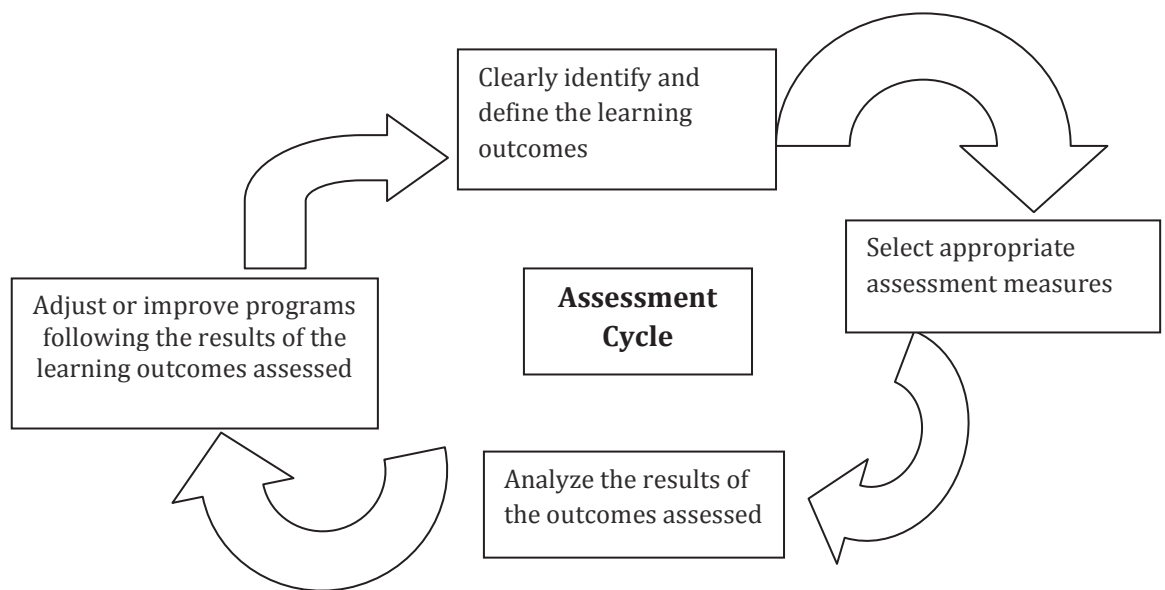


Fig.12.3: The Four Steps of the Assessment Cycle

Step 1: Clearly identifying and defining the learning outcomes

The first step is to formulate the learning outcomes that describe what students should be able to do (abilities), to know (knowledge), and appreciate (values and attitudes) following completion of the program/course.

Step 2: Selection of suitable assessment measures and assess the learning outcomes

Multiple ways of assessing the learning outcomes are usually selected and used. It is important to determine how the data will be using appropriate tools and techniques.

Step 3: Analyze the results of the outcomes assessed

The data/evidence is to be analyzed and the results reported in a meaningful way. Both quantitative and qualitative strategies may be used for result/data analysis and interpretation. Utmost care is required while analyzing and compiling the report.

Step 4: Modifying or adjusting programs following the results of the learning outcomes assessed

This step is a critical step of the assessment process. Assessment results are worthless if they are not used properly or those that do not help to modify the teaching learning process or lead to adjustments or improvements in programs. The results of assessments should be disseminated to all concerned.

Activity1

You have been asked to assess the performance of a task of your classmate. Which type of assessment you will employ? Give reasons.

12.6 ASSESSMENT AT VARIOUS LEVELS

Assessment methods are the strategies, techniques, tools and instruments for collecting information to determine the extent to which students demonstrate desired learning outcomes. Several methods should be used to assess student learning outcomes. Relying on only one method will only reflect a part of students' achievement. Therefore, a combination of direct and indirect assessment methods should be used. For example, responses from student surveys may be informative, however, when combined with students' test results they will be more meaningful, valid, and reliable.

12.6.1 Assessment at Pre- Primary Level

School Education is a continuum spanning pre primary to higher secondary classes. The early years are crucial in the growth and development of a child. Assessment at this stage has vital implications since it is a critical part of a high-quality, early childhood education.

However, the course of development in young children is uneven and episodic. In some children, learning will be rapid while others may not. Therefore, it is very important that the information is interpreted correctly. Also, the developmental characteristics of young children make it even more important that teachers and caregivers, be trained to think about and use assessment properly. Methods of child assessment at this stage may be mostly informal (conducting natural observations, collecting data and children's work for portfolios using teacher ratings) and some may be formal (using assessment tools). Both methods are effective and can help inform educators and parents about a child's progress. Some of the most commonly used methods are discussed below:

Observation: When educators/teachers do an assessment, they observe a child to get information about what s/he knows and what s/he can do. Observation must cover all facets of development, including intellectual, linguistic, social-emotional, and physical development. A profile for each child may be maintained which can be used to compile the progress of child in comparison to her/his previous performance. These observations may be recorded (in her/his diary/log book/comments written on child's notebooks/worksheets/projects, etc.) as and when required, for her/him to monitor the learning progress of each child. It needs to be used meaningfully to help children improve their learning and progress. This assessment record is also a great tool to share with parents so they can follow their child's progress at school, understand their child's strengths and challenges, and plan how they can help extend the learning into their homes.

Portfolios: Portfolios are a record of data that is collected through the work children have produced over a period. This may include worksheets, creative drawings, craftwork, observations interests, abilities and problems of the child. It is a collection of not just the best but also all kinds of a child's work or activities done over a period.

Checklists and Rubrics

Checklists and rubrics are a more concrete way to evaluate young children. Checklist is a quick way to gather data of the relevant factors. A checklist has a list of skills that a child is expected to perform. From the list, teacher/ assessor checks off each item the child is able to do.

A rubric uses a scale to show the degree of mastery of a given task by a child. At least three levels for each task to be included. The lowest level means the child is unable to perform the task. The highest level indicates mastery of the task. The levels in between allow you to indicate the child falls somewhere in between. Rubrics outline the identified criteria for successfully completing an assignment and establish levels for meeting those criteria. Rubrics are used to score everything from essays to performances.

Inventory: It is another way to evaluate children. It contains a list of terms which a student is capable of performing at an age. Preschool teachers and early childhood development experts usually use some form of preschool assessment standards to evaluate how a preschool student is doing in various skill areas including gross motor and fine motor skills. One of the most difficult issues in early childhood assessment is to find the needs of children who want special assistance as a result of cognitive, emotional, visual, auditory, or motor impairments. Utmost care should be taken in the selection of tools and tests to assess them. Also, flexibility in the choice of assessment method should be considered for optimal results.

12.6.2 Assessment at Primary Level

The National Education Policy, 2020 highlights that assessment should mirror the full range of the child's learning, encompassing the cognitive, creative, affective, and physical and social dimensions of his/her development. This requires a broad continuum of modes of assessment in order to create a picture that will reflect the full range of the child's progress, attainment and development.

Teacher observation: As with pre-primary children, teacher observation is invaluable to gather evidence about their progress and achievement. Observing students while they are performing a task, demonstrating a skill, solving a given problem, interacting with peers/ others can provide insights into the student's learning progress and growth. Observations may be informal or incidental, structured or scheduled.

Question and Answer: Very often teachers resort to this technique for assessment of outcomes. Teachers use both verbal and written forms though verbal practices are more prevalent to test what students know or can do. This technique is easy to administer but care should be taken to provide adequate wait time for students to think before coming up with an answer. In addition, a variety of questions may be asked including open-ended questions. Students responses may be recorded and used for further planning to enhance learning.

Teacher designed tasks and tests: Teacher may assign tasks to be completed by the students within a period of time and the progress may be recorded.

Work samples/ portfolios: They are a record of multiple data of student learning performance, participation in co-scholastic areas, etc. Such data is highly useful in evaluating student's performance throughout the session.

E- Portfolio: In the present day with such tremendous advance in digitization, e-portfolios are replacing the conventional portfolios. E- portfolio is synonymous with digital portfolio or online portfolio. E-portfolio is a digitized collection of information, artifacts, presentations, demonstrations, accomplishments of an individual student, a group of students, or an institution. The data may be in the form of text in microsoft word, PDF or any other version, power point presentation, digital images, audio/video clips, blogs, comments etc. These digital contents are stored in digital formats. Such data is of immense value to the teacher for the purpose of evaluation. It helps students in doing self-assessment as well as peer assessment. Retrieval of information becomes very easy when data is stored in this way.

Projects: Project work is a method of providing a rich learning experience to students. In such assignments, students get an opportunity to synthesize knowledge from various areas of learning, and critically and creatively apply it to real life situations. Such engagements lead to holistic development by acquiring skills like collaboration, communication, cooperation and prepare them for lifelong learning.

Standardized tests: We all are familiar with standardized tests. They are tests administered to all students in a class to measure their progress. Such tests generate quantifiable data which can be further used for grading performance achievement etc.

Anecdotal Records: A teacher makes observation of his/her student on a day today basis. When his/her observation of an event or incident in a student's life, his/her behaviours, skills, attitudes, performance etc are noted in the form of a concise narrative it may be called anecdotal record. Such notes are highly useful to record qualitative information about students. Such records provide cumulative information. It helps in identification of individual needs of students so as to modify pedagogy accordingly. It is also an efficient way

to track their progress over a period of time and sharing information with parents.

Rubric: As discussed in pre-primary level, rubrics scoring outlines the criteria identified for successfully completing an assignment and establish levels for meeting the criteria.

Apart from the above methods, tests and assignments are also used for generating data on student performance.

12.6.3 Assessment at Secondary and Higher Secondary Level

Children belonging to Class IX & X constitute secondary level and those in XI-XII belong to higher secondary level. Most of the techniques used in primary are still relevant like observation, portfolio, anecdotal records etc. However, other means of measurement may also be used.

Presentation

In this strategy, students are expected to verbalize their knowledge, present their thoughts and ideas about a topic and summary of their learning. It may provide the basis for assessment upon completion of a student's project or essay.

Exhibition/demonstration

An exhibition/demonstration is a public performance during which a student explains and applies a process, procedure, etc. in concrete ways. It would provide insight into to an individual achievement of specific skills and knowledge.

Interview

Interview is one of the common ways of assessment by a teacher. It is a face-to-face conversation in which teacher uses inquiry to assess the student's knowledge and understanding of a topic or problem. This is used by the teacher to explore the student's thinking, obtain clarification, and probe for motivations. However, mostly it is conducted in a face-to-face setting, ICT facilities like Skype, video conferencing, and online interviews are also gaining popularity now.

Performance task

During a performance task, students create, produce, perform, or present works on "real world" issues. The performance task may be used to assess a skill or proficiency, and also to gather information on the process as well as the product.

Quiz

A quiz requires students to respond to prompt in order to demonstrate their knowledge (orally or in writing) or their skills (e.g., through performance).

Quizzes are usually short and the results are available immediately. It is most commonly used for exceptional students.

Peer and self-assessment

Now-a-days more and more encouragement is given to peer and self-assessment strategies especially in the context of assessment as learning.

Peer assessment

This type of assessment draws upon the ability of students to observe, analyze and reflect on the progress/ task of their peers. Students may provide feedback to their peers about strengths of the task that has been completed and/or what aspects have been completed well. Feedback may be oral, written or digital. However, it is very essential that such feedback should be moderated by their teachers. Peer assessment provides an opportunity for students to develop their social, collaborative and reflective skills.

Self-assessment

It is a process by which the student gathers information about, and reflects on, his or her own learning. It is the student's own assessment of personal progress in terms of knowledge, skills, processes, or attitudes. Self-assessment leads students to a greater awareness and understanding of themselves as learners and their metacognition. The information gathered from peer and self-assessment can be used by both students as well as teachers. The strategies can be formal or informal giving ample scope for students to reflect on their learning in relation to the outcomes, and recognize ways to improve their learning.

Collaborative activities

Apart from individual activities, collaborative learning activities also provide scope for assessment. Collaborative activities are as a result of interaction between students engaged in the completion of a common task. Students work together, face-to-face and in or out of the classroom or within their school. Sometimes it may be between schools, locally or at national and international levels. Assessment activities in the collaborative node may take the form of group discussions, cooperative group work, team assignments and projects, group investigations, presentations, mixed-ability and differentiated group activities and paired tasks.

When collaborative activities are used for assessment purposes, it may produce a wealth of information pertaining to not only cognitive abilities of students but also those in the affective domain like attitude, team spirit, leadership qualities, empathy, compassion, cooperation and also higher order skills like problem-solving, creative thinking, critical thinking etc. These are used more and more at Senior Secondary level and in higher education.

12.6.4 Assessment in Higher Education

To keep pace with momentum for change and growth in the globalized economy of the present day, there is an urgent need to transform the existing practices of curriculum and assessment in higher education. The Government of India, through the Ministry of Education, is the controlling authority of the assessment systems and procedures. However, the Educational Boards and Councils in different states and union territories use their own strategies to assess and evaluate the learners still keeping the standard and norms of the central assessment system. Assessment is usually conducted through exams or continuous assessment taking into cognizance the knowledge or skills gained by the student within a specific field. Annual examination or the semester examination plays a pivotal role in matters of career choice, pursuit of higher education etc.

External examination: Currently much emphasis is laid on external University examination. It is held either at the end of a semester or year, In most institutes/ colleges, student assessment is still carried out as a single standardized exam It is based on this one test that the students are judged. The mark sheet and certificate becomes the entry ticket to the job industry. Since scores in these examinations are given so much priority and considered as deciding factors for employment or higher studies, the only aim of student is to score more and more marks which in turn causes undue stress and anxiety among them.

Grading System: This is followed in most higher education institutions. The mark obtained by a student is given a specific grade and grade point. The absolute grading system so followed has its limitations and do not reflect the whole picture of a student. This assessment procedure is quite ineffective, as it does not give a true picture of the potential, knowledge retention and its applicability in students.

Now- a- days, multiple assessments are making inroads in Higher Education level. The trend we witness now is to have on-the-job learning projects, presentations, case study discussions, frequent internships etc., as an approach to assessing exactly how much a student understands. Other modes of assessment administered in colleges and institutes in our country are:

- ❖ Assignments (Daily/Weekly/After end of topic)
- ❖ Quiz, self-study, seminar
- ❖ Panel discussion, case study
- ❖ Mid-term test, end-term test, Laboratory Assignment, Internship, etc.

Use of Technological interventions

Today, we witness technological advancement in all fields especially in education. The proliferation of digital devices, ICT enabled systems and gadgets are influencing classroom teaching-learning process. Technology has

the potential to revolutionize learning and evaluation methods also. Various modes of learning by integrating ICT like blended learning, synchronous learning, asynchronous learning, flipped classroom, etc. are deployed for enhancing the teaching- learning process. As schools become increasingly equipped with computers, tablets, and wireless internet access, the system of assessment is also subjected to change. Computer-based or online assessment is increasingly used along with paper-based tests and assessments. It becomes very clear that no single form of assessment is adequate in developing a comprehensive profile of the child. What is important is that the mode of assessment should match the purpose of the assessment.

Check Your Progress 2

Notes: a) Write your answers in the space provided after each item.

b) Compare your answers with the one given at the end of the unit.

- 1) How is the role of the teacher in assessment of learning different from assessment as learning?

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- 2) How does assessment contribute to enhanced learning?

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12.7 LET US SUM UP

In this unit, we have discussed the basic concepts of assessment and evaluation we have also discussed the different types of assessment and also the major differences among assessment of learning, for learning and as learning. We have also discussed the relationship between assessment and learning and the scope of assessment to enhance learning. You have also been introduced to the various methods of assessment and the tools used at different level from pre- primary to higher education. Use of technological interventions has also been explained. It is worthwhile to remember that all our attempts should be focused on improving the learning outcomes of students thereby improving the quality of education.

12.8 UNIT- END EXERCISES

- 1) What is Assessment? How is it beneficial?
- 2) Discuss the role of teacher in assessment of learning and assessment as learning.
- 3) Mention some of the methods used for assessment at primary and secondary level.
- 4) How can we integrate technology in assessment?

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12.10 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

- 1) Some of the recent reforms are Semester system, Formative and summative assessment, Continuous and comprehensive evaluation.
- 2) Every child is unique. By assessing one aspect alone it is not possible to get a holistic picture. Therefore, a variety of activities needs to be considered. 'One size for all ' may not fit in.
- 3) Measurement comprises the observations that are expressed numerically. Evaluation covers all aspects both scholastic and co-scholastic, and includes qualitative and quantitative observations.

Check Your Progress 2

- 1) In assessment of learning teacher's role is central in designing, conducting and evaluating, but in assessment as leaning s/he is more of a facilitator, co-constructing knowledge and helping students to understand their metacognitive process.
- 2) Assessment is useful to gather valid, reliable and useful information about student learning which can used for monitoring student progress and achievement with respect to learning outcomes and also for taking appropriate measures to facilitate the students to reach the set goals.