

# Chapter 5

## Techniques and Tools of Evaluation

**Tools and techniques** are required to gather information. These should be *valid, reliable and usable*.

Interpretation of gathered information needs to be given in numerical scores, grades as well as in qualitative terms. Judgement should be made not just on scholastic aspects but also on co-scholastic aspects which depend to a large extent on the learning ambience and learning culture of an institution.

As far as interpretation is concerned, attainment can be measured in terms of three levels. First is with reference to the learner himself/herself and the current status of progress. The learning gaps need to be identified and marked upon. The second level is to identify the status of the learner with reference to his/her peer group. (Percentile Rank)

The third level is with reference to the criteria. The criteria means the expected level of learning keeping in view the required skills.

An evaluation tool is a means of appraisal scientifically designed to evaluate or measure what is required to be evaluated or measured

**Following factors need to be considered while using a tool:**

- Balance
- Objectivity
- Discrimination
- Relevance
- Fairness
- Validity
- Speed
- Reliability

### Specific Tools

<b>Anecdotal Record</b>	<b>Rating Scale</b>	<b>Aptitude</b>	<b>Inventories</b>	<b>Teacher Made and standardised Tests</b>
<ul style="list-style-type: none"><li>• It is used to assess past behaviour of the students.</li></ul>	<ul style="list-style-type: none"><li>• It is used to classify opinions and judgements regarding situations, objects etc.</li></ul>	<ul style="list-style-type: none"><li>• They are used to measure the potential performance and special ability of students.</li></ul>	<ul style="list-style-type: none"><li>• They are used to assess the expression of the inner feelings of individuals through questionnaires etc.</li></ul>	<ul style="list-style-type: none"><li>• These are used to measure in numerical terms the attainment of students in various school subjects.</li></ul>





Techniques of Evaluation consist of test and other items for measuring growth in particular outcomes of learning. Tools are the instruments used for measuring the learning outcome such as question papers, observation-schedules, rating scale, checklists etc. For example, while observation is a technique a checklist is a tool.

## 1 Observation

Information can be best collected about children in '*natural*' settings. Some information is based on teachers' observations about learners in the course of teaching. Other information is based on planned and purposeful observation of students on activities/tasks.

### 1.1 Advantages of Observation

- Various aspects of personality development can be assessed through observations.
- Can be used to assess individuals as well as groups.
- Assessments can be made during varying time periods.
- Evidence of child's performance/knowledge is based on an '*on-the-spot record*'.
- Over time, detailed observations of behaviour as well as interests, challenges, -patterns/trends emerge which allow teachers to create a comprehensive picture/view of the child.

### 1.2 Concerns Regarding Observation

- Avoid arriving at inferences/interpretations or jumping to conclusions. It is important to take down more than what is actually seen.
- Dependent on the skill of the observer which determines '*what*' is observed.
- Requires sensitivity and unobtrusiveness in the way the observation is done.
- Observations to be made over a period of time, across different activities and settings.

### 1.3 Suggestions for implementation of Observation

Recording details that not only describe the actions but reveal how a child feels about what she/he is doing, details on how she/he is doing something as well as when she/he does it, the quality of her/his interrelationship with people and materials, and what he/she says etc.

Noting comments about the child's behaviour in parentheses based on processes which can be inferred at a later point of time.



## 1.4 Checklists for observation in various subjects areas:

### 1.4.1 Using a Checklist for Observation in English

(e.g. Debate)

• Does the child have appropriate knowledge of the content?	Yes / No
• Does the child put forth an argument convincingly?	Yes / No
• Does the child speak fluently with proper diction and pronunciation?	Yes / No
• Is the child able to contradict a given point?	Yes / No
• Does the child take criticism positively?	Yes / No

(e.g. Group Discussion)

• Does the child exhibit Leadership skills?	Yes / No
• Does the child live up to the role assigned to him during a role-oriented discussion?	Yes / No
• Does the child have content knowledge?	Yes / No
• How well does the child put forth his views?	Yes / No
• Does he show respect to the peer group?	Yes / No
• Does he have proper communication skills?	Yes / No
• Does he show sensitivity towards environment?	Yes / No
• Does he exhibit proper body language while interacting ?	Yes / No
• Does he raise relevant points?	Yes / No
• Does he give fair chance to others' for their views?	Yes / No

### 1.4.2 Observation In Social Science using a Checklist

(Group discussion on the situation given)

• Does the child have appropriate knowledge about the situation?	Yes / No
• Does the child possess understanding and creative skill ?	Yes / No
• Is the child able to provide suitable solutions to the related problems and contemporary issues?	Yes / No
• Does the child show his leadership skills and take criticism positively during group discussion?	Yes / No

### 1.4.3 Observation In Science using a Checklist

(e.g. Experiments)

• Is the child inquisitive about different phenomena around us?	Yes / No
• Can the child draw inferences from an activity?	Yes / No
• Can the child think logically and rationally?	Yes / No
• Is the child able to set up the right apparatus?	Yes / No
• Is he able to use the appropriate technique to perform the experiment?	Yes / No
• Is the child able to use the material and apparatus correctly?	Yes / No
• Is the child able to achieve the desired result?	Yes / No
• Is the child able to interpret and derive the conclusion?	Yes / No
• Is the child able to apply theoretical knowledge in practical situation?	Yes / No
• Does the child exhibit in depth knowledge during viva?	Yes / No
• Is he able to answer the questions correctly?	Yes / No

### 1.4.4 Observation In Maths Using A Checklist

• Does the child have good understanding of the concepts?	Yes / No
• Has the child worked with precision, neatness and accuracy?	Yes / No
• Can the child interpret word problem into mathematical form?	Yes / No
• Can the child think logically and rationally?	Yes / No
• Can the child interpret data?	Yes / No
• Is the child able to solve problems?	Yes / No
• Does the child solve problems accuracy?	Yes / No

## 2. Projects

These are undertaken over a period of time and generally involve collection and analysis of data. Projects are useful in theme-based tasks to be completed as class work and/or homework in groups. They can be open ended or structured and can be both individual or group projects. They should be based on contexts outside the textbooks and related to the child's environment/culture/ lifestyle/ community based social programs.



## 2.1 Advantages of Projects

- Provide opportunities to explore and work with one's hands.
- Observe, collect data, analyze, organize and interpret data and draw generalizations.
- Provides an opportunity to work in groups and in real life situations.
- Helps develop a positive attitude towards group work, sharing and learning from each other.

## 2.2 Concerns regarding Projects

- The nature and difficulty level of the projects should be such that students can do it by themselves.
- Materials to be used for the project should be available in the school, neighbourhood or home setting. These should not put a financial burden on the parents.
- Each school could go in for a Resource Centre, which would have locally available materials.

## 2.3 Suggestions for Implementation of Projects

- Project topics should be decided/chosen, planned and conducted by students largely with the teacher acting as a guide.
- Encouragement should be given to group projects. These will enable students to work together, share experiences and learn from each other.
- Projects keep giving students an opportunity to explore, investigate and work in groups.
- Children can be encouraged for judicious use of materials and keep them back after use.

## 2.4 Checklist for Projects in English

• Has the child done enough research and collected relevant content?	Yes/No
• Does the work reflect creativity and aesthetic skills?	Yes/No
• Does the presentation show the understanding of the concept?	Yes/No

### 2.4.2 Checklist for Projects in Social Science

• Does the child possess knowledge about the content of the project?	Yes/No
• Does the child exhibit aesthetic skills?	Yes/No
• Does s/he understand the concept of his project?	Yes/No





• Has s/he used any methodology while making the project?	Yes / No
• Has s/he done any research work for the project?	Yes / No
• Has s/he referred any book or newspaper?	Yes / No
• Has s/he taken any help from the internet?	Yes / No
• Has s/he conducted any interviews regarding the project?	Yes / No
• Has the child used appropriate material to make the project?	Yes / No
• Has s/he put forth any visual i.e. map, diagram, graph, pictures in the project?	Yes / No
• Is the approach of the child towards the project original?	Yes / No
• Is the project relevant to the real life situation?	Yes / No

#### 2.4.3 Checklist for Projects in Science

• Does s/he have an understanding of the concept?	Yes / No
• Is the content relevant?	Yes / No
• Has the child used appropriate material and methodology?	Yes / No
• Is the project based on experimentation or survey or Case Study?	Yes / No
• Has the result been interpreted appropriately?	Yes / No
• Is the work applicable to real life situations?	Yes / No

#### 2.4.4 Checklist for Projects in Maths

• Is the approach towards the project original?	Yes / No
• Is the content and information authentic and relevant?	Yes / No
• Is the presentation of the project done aesthetically?	Yes / No
• Is the project supported with proper write-up?	Yes / No
• Has the result been interpreted appropriately?	Yes / No
• Does the project help in clarity of accurate?	Yes / No
• Is the content of the project accurate?	Yes / No
• Is the project based on experimentation or survey?	Yes / No



### 3. Questions

An excellent way of finding out what children know, think, imagine, and feel. The learners can be assessed through questions and problems. Even the ability to make a set of questions for given answers is a valid test of learning. A teacher can in the course of teaching as part of formative Assessment come to know of learning difficulties in children by asking questions that make children think.

#### 3.1 Characteristics of a good question:

##### 3.1.1 Objective based:

A question should be based on a pre-determined objective and should be framed in such a way that it tests the objective effectively.

##### 3.1.2 Instructions:

It should specify a particular task through the instructions. For this, appropriate directional words should be used, and structured situation should be given.

##### 3.1.3 Scope:

It should indicate the limit and the scope of the answer (length of the answer) in accordance with the estimated time and marks allotted to it.

##### 3.1.4 Content:

The question should test the same area of content which it intends to test.

##### 3.1.5 Form of Question:

The form of question depends on the objective and the content area to be tested. Some forms are better than the others for testing certain abilities.

##### 3.1.6 Language:

A good question is framed in a clear, precise and unambiguous language, well within the comprehension of the students.

##### 3.1.7 Difficulty level:

A question should be written keeping in view the level the students for whom it is meant. The difficulty of the question depends upon the ability to be tested, the content area to be tested and the time available to answer it.

##### 3.1.8 Discriminating power:

A good question must discriminate between bright students and others.



### 3.1.9 Delimited scope of the answer:

The language of the question should be specific and precise so that the scope of the expected answer is clearly delimited or defined.

### 3.1.10 Value points:

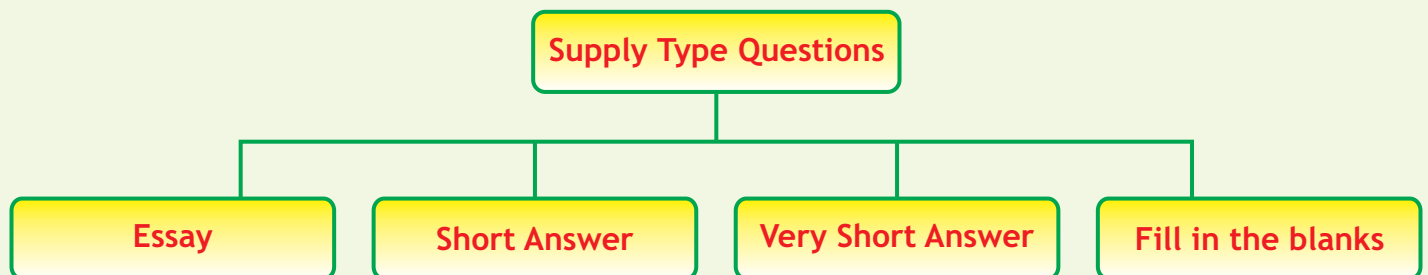
Value points or marks carried by a question as a whole and also its sub parts should be clearly mentioned.

## 3.2 Supply Type Questions

In this type of questions student has to supply the answer. The answer may vary from one word to several paragraphs. Such type of questions are also called as '*free-response*' questions. Supply-type questions may be divided into four categories-*essay type, short answer type, very short answer type and fill in the blanks type questions.*

## 3.3 Essay Type Questions:

The term essay implies a written response which may consist of one or two pages. The student is allowed to have freedom with respect to wording, length and organization of the answer. A distinction should be made between the essay type question used to measure knowledge and the essay type question employed to test writing skills in languages, which is called a composition test.



There are many abilities which may not be tested through any other form of question but only by the essay type question. These abilities are:

- To select relevant facts from the body of acquired knowledge.
- To identify and also establish relationships between various aspects of knowledge.
- To weigh the proof with respect to implications of the gathered information.
- To organize, analyse, interpret facts and other types of information to draw inferences.
- To adopt an indigenous or original approach to solve a given problem.



- To defend one's point of view through facts, data and suitable arguments.
- To critically examine the degree of adequacy, accuracy and relevance of the available information in a given situation.
- To demonstrate internalized attitude towards problems and issues.
- To appreciate a problem at both the macro and micro levels.
- To conceive, design and suggest new and innovative approaches for tackling a given problem.

### 3.3.1 Constructing Essay Type Questions:

Essay type questions usually begin with such terms as '*discuss*', '*explain*', '*evaluate*', '*define*', '*compare*', '*contrast*', '*describe*', etc. Essay type questions are good when the group to be tested is small and limited time is available for test preparation. It is also quite suitable to test written expression.

### 3.3.2 Some sample essay type questions are as under:

- Why do sandy soils not hold enough water:? (Question Form)
- Name the four sense organs and draw their diagrams (Statement Type)

#### Here is another example :

- Give reasons why Roosevelt won the 1932 presidential election in the USA' and the inclusion of styles such as:
- The most important reason why Roosevelt won the 1932 presidential election was Hoover's unpopularity. Do you agree? Explain your answer.
- The first encourages rote-learning and does not call upon the skills of independent thoughts, analysis, and evaluation required. The second assumes vital importance for all and not simply the gifted few.

### 3.4 Short Answer Questions:

Essay type questions suffer from lack of objectivity and reliability while objective type questions cannot be used for testing certain aspects of growth like the ability to express in brief, summarise and organize the ideas in precise manner. Short answer questions are a good via-media between the two extremes. If understood and framed properly, they have the advantages of both the objective type and essay type questions.

- Why is the pyramid considered as one of the seven wonders of the world? (Question Form)
- Give four points to show that plants differ from animals. (Statement Form)



### 3.4.1 Some characteristics of short answer questions are as under:

- Short answer question can be used profitably in both unit and term tests.
- It can be used to test almost all the objectives of teaching.
- It helps students to develop the ability of organising and selecting relevant facts.
- It can be scored more objectively than essay type questions and thereby ensure reliability.
- These questions help in covering more syllabus because more number of questions can be put in lieu of one-essay type question. This improves the validity of the question paper.

### 3.5 Very Short Answer Questions:

- Very short answer questions are those which have one specific testing point and can be marked quite objectively.
- More content can be tested through these questions and more reliability and validity can be ensured.
- It helps in testing knowledge of the examinee by asking him to supply a word, phrase, or a figure or a sentence which is required for answering the questions.
- It can be answered in one word to one sentence.
- It mostly takes one to two minutes to answer and the range of marks allotted is half to one mark.
- Very short answer questions can be used profitably in all the school subjects.
- There are many types of very short answer questions some are given below:

#### 3.5.1 Completion Type: It is useful for testing expression in language testing.

Q. I was so worried.....

#### 3.5.2 Analogy type:

Q. Lime stone: marble Coal:.....

#### 3.5.3 Location Type: In Geography such questions can be used for testing map skills.

Q. Show on the map- Sydney, Colorado Desert.

In language also such questions can be used for picking up the key ideas, key words or sentence, synonyms and antonyms etc., from the given passage.

- **Transformation Type:** This type is used only in language testing. Reported speech, voices, synthesis, transformation of sentences, etc., can be tested through this type of question.



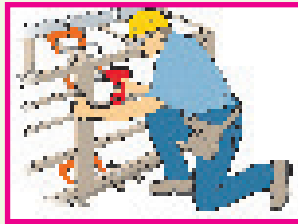
### 3.6 Pictorial Type

Q. What are the occupations of the following?

**Persons**

**Occupation**

a. Carpenter



b. Potter



c. Nurse



### 3.7 Interpretive Type

3.7.1 **Directions:** Read the bus time table given below and answer the questions that follow:

**Himachal Pradesh Roadways Bus Service Time Table**

<b>Route</b>	<b>Dep. Time from Delhi</b>	<b>Dep. Time from Other direction</b>	<b>Distance (in Km.)</b>	<b>Fare (in Rs.)</b>
Delhi-Baijnath	1815	1730	539	77.00
Delhi-Chamba	2000	1400	626	84.00
Delhi-Dharamsala	2145	1930	513	71.50

- What is the title of the bus time table?
- How many routes are listed in the time table?

### 3.7.2 Fill in the Blanks Type:

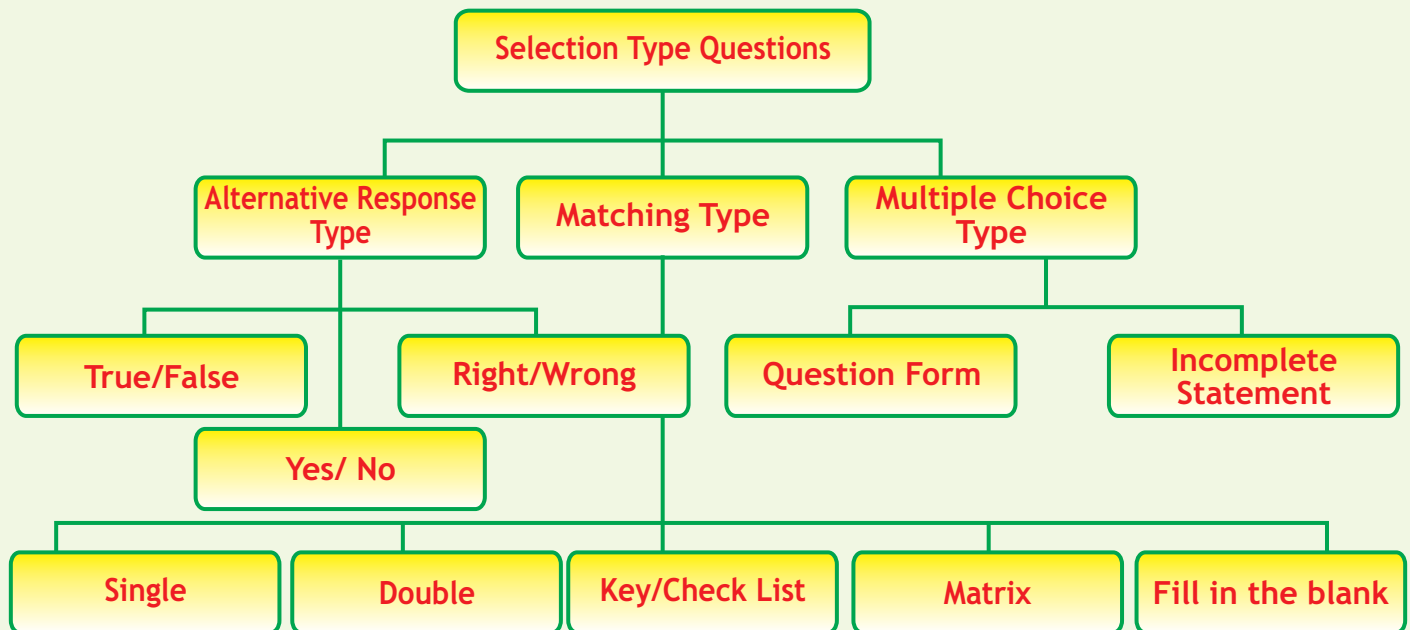
In this type of question a statement is provided. In which one word or two words at different places are removed and students are asked to fill in the blanks with appropriate words. An example of this type is given below:

- *All living things respire in order to obtain \_\_\_\_\_.(energy)*

### 3.8 Selection Type Questions

In these type of questions students are supposed to answer them by selecting the correct answer among the provided choices. Such questions are also known as objective type questions. These may be divided into alternative response type, matching type and multiple choice type questions, etc.

Selection type questions are all objective type questions. Objective type questions have only one correct answer which the student has to choose out of the given choices. As these questions can be marked objectively, they are called objective type questions. This means that the examinee will get the same marks no matter who evaluates the question. They can be scored mechanically and that is why these are very popular particularly in a situation when large number of candidates are to be tested. The following are different forms of objective type questions.





### 3.8.1 Alternative Response Type:

In these type of questions students have to select one out of two alternatives as a correct answer. The different type of alternative response questions are as under:

a) *True-False or Yes-No Question:*

In this type of question a statement is given and the candidate is asked whether it is true or false (T/F). True/False questions are easy to construct and score. They provide a fairly reliable measure of students understanding particularly in the classroom testing.

b) *Write 'T' if the statement is 'True' and 'F' if the statement is 'False'*

- Both animals and plants are living things
- All animals eat small animals

c) *Right/Wrong type or Yes/no Type :*

Put tick (✓) mark if statement is Right and (X) if Wrong.

- Liquids do not have a definite shape
- Ice is lighter than water

b) *Matching Type:*

In matching type questions there are two columns. The words or statements given in column one are to be matched with the answers given in column two. The matching type question may be of the following.

c) *Single Matching:*

In this type of question two columns are used. In left column stimuli are presented whereas in right column responses are given. Students are asked to match the response with a given stimulus.

d) *Direction:*

Match the words given in Column A with Column B to make a correct pair. (*Simple*)

	<b>Column A</b>	<b>Column B</b>
a)	Morning	Stars
b)	Night	24 hours
c)	Day	Sun light

e) *Direction:*

Match the words given in column A with the meanings given in column B. (*Difficult*)





<b>A</b>	<b>B</b>
Barber	One who makes bread/biscuits, etc.
Waiter	One who is incharge of a place
Baker	One who cuts people's hair
Architect	One who serves food in a hotel
Caretaker	One who designs buildings, bridges, etc.

f) *Double Matching:*

In this type of item, one list of stimuli is provided to test two areas of knowledge. So three columns are used instead of two columns. In middle column, stimuli and in both left and right columns, two sets of responses are provided.

- There are three columns i.e. I, II and III. In the column II there is a list of four animals while the Column I provides animal behaviour and Column II gives the type of foods they usually eat.

Put appropriate number and letter in Column I and III.

<b>Column I (Behaviour)</b>	<b>Column II (Animal)</b>	<b>Column III (Food)</b>
1. Likes daylight but active in night	a) Rat	A. Live insects
2. Likes day light and active in day	b) Moth	B. Flower nectar
3. Does not like day light	c) House	C. Flesh of animals
4. Does not like day light but active in day and night	d) Lizard	D. Plant leaves
		E. Bread
		F. Load of organic matter
		G. Wood
		H. Snakes

g) *Key List or Check List Items:*

In this type of item, students are provided two/three alternatives as the key list to make decisions about a number of statements on the basis of provided key list.



For each of the following matters use letters to indicate whether the matter is a solid (S)/ liquid (L)/ Gas (G).

<b>Matter</b>	<b>State</b>
1. Water	
2. Mercury	
3. Vapour	
4. Iron	

h) *Matrix Items:*

These are extensions of double matching type items wherein more than two responses are linked to a stimuli. In such type of items, stimuli are presented vertically (in row) wherein responses are presented horizontally (in columns). Students are asked to check each cell in which the response across the top is true of each of the stimuli along the side.

**Deficiency can cause**

<b>VITAMINS</b>	<b>Excessive Bleeding (1)</b>	<b>Beriberi (2)</b>	<b>Rickets (3)</b>	<b>Anemia (4)</b>	<b>Scurvy (5)</b>	<b>Night blindness (6)</b>
A						
B <sub>1</sub>						
B <sub>12</sub>						
C						
D						
K						

Fill in the Blanks Type:

- A \_\_\_\_\_ can talk (Crow / Parrot).

i) *Multiple Choice:*

Multiple choice items are the most useful of all the objective type items. In these questions there is a stem which poses the problem. The stem may be in question form or in the form of an incomplete statement. Then there are four or five choices given for an answer. The student has to select the correct answer from the given alternatives. On the basis of the stem, multiple choice questions may be of two types.



1) *Question Form:*

*(Testing Instructional Objective-Interpretation)*

a) Which one of the following diseases is a non-infectious disease?

1. Small pox
2. Heart attack
3. Malaria
4. Cholera

b) *Incomplete Statement Form:*

*(Testing instructional objectives: Identify relationships)*

The character shared by the whale and a bat is the possession of

1. hair
2. wings
3. limbs
4. neck

The forms of questions discussed above may be used for different purposes of testing and also making judgement regarding the achievement of the students. If in a test, more varieties of the question forms are used then it will definitely help in testing various objectives and content areas in a better way on one hand and also making it more reliable and valid instrument on other hand. It is true that though different forms have some limitations, they do have advantages over each other. Therefore, at the time of selection of forms all aspects should remain in the mind of teachers so that these forms may be exploited for their best use.

#### **4. Checklists**

##### **4.1 Advantages of Checklist**

- Quick and easy to implement.
- Provides specific information about specific objectives.
- Can point towards a trend of how and when skills have been acquired by the child as well as a group of children.



## 4.2 Concerns Regarding Checklists

- Limited information, only indicating presence of a skill.
- Does not indicate child's response to different situations or provide specific examples of responses.
- Does not provide information about context.
- Can at times become unwieldy because of the number of specific items.

## 4.3 Suggestion for implementation of Checklists

Add a '*comments*' column to add value to the information in the checklist marking.

Use this tool in conjunction with other methods of assessments.

If developed by others, a checklist may not be suitable for the objectives that you as teachers have in mind, or for the groups, you wish to use it with.

An excellent way of finding / recording specific behavior /action/ processes / outcomes / approaches / problem and helps to focus attention on particular aspects of evaluation.

### 4.3.1 Examples of Checklists

Given below is a series of Checklists for assessing Life Skills:

#### Thinking Skills

- Does the student show creativity during class activities? Does she/he accept the challenge enthusiastically?
- Does he/she try to give new ideas or concepts and try to go beyond conditioned setups?
- Does he/she ask questions related to the set task?
- Does he/she create doubts by asking irrelevant things away from the task?
- Does he/she try to help others or motivate others during group activity?
- Does he/she try to volunteer for special assignments?
- Does he/she try different ways of doing a single activity?
- Does he/she like to think out of the box?
- Does he/she try to apply knowledge or skills in new situations?
- Does he/she think about all the possible options before starting a task?





### Social Skills - A Checklist

- Does he/she show patience during a group task for slow learners to complete their task?
- Does he/she try to help a classmate who is feeling low or who's unable to cope up with the given work?
- Does he/she appreciate the ideas and qualities of others?
- Does he/she feel comfortable sharing his ideas with others?
- Does the child always like to be appreciated?
- Does he/she come and ask how to correct the mistakes the teacher pointed out in his work?
- Does the student maintain a comfortable level of eye contact?
- Does the student interrupt to tell his own stories/give his opinion/offers unasked advice?
- Does he/she try to break rules setup for the task by using rude language?
- Does he/she try to exhibit negative behavior and upset others?

### Emotional Skills -a Checklist

- During an activity/competition does the child often say, '*I'll never win, I'm just not a lucky person?*'
- Does he/she choose an activity/task according to his/her ability during a group work?
- Does he/she scream at the classmates when s/he is angry or disturbed?
- Does he/she try to do the task again, if declared unsuccessful in the first attempt?
- Does he/she try to improve weaker areas by putting in regular practice?
- Does he/she try to take help of teacher/partner under difficult situations?
- Does he/she try to get secluded when under stress?
- Does he/she try to take up some healthy activity like reading, gardening or playing during stressful time?
- Does he/she become argumentative during discussions?
- Does he/she show disrespect to the system or discipline of the class/school?

## 5. Portfolio

Collection of evidences of students' work over a period of time. It could be day-to-day work or selection of the learner's best piece of work.



### 5.1 Advantages of Portfolio

- Provide a cumulative record. In the process, a picture of how a skill or knowledge area develops emerges.
- Enables the student to demonstrate to others, his/her learning and progress.
- The child becomes an active participant in learning and assessment.

### 5.2 Concern regarding Portfolio

- Selecting work to be put into the Portfolio should have a specific reason.
- Not all papers/items of work are to be included. This will become unmanageable.

### 5.3 Suggestions for implementation of Portfolio

- Student participation in selection of Portfolio contents is to be encouraged, as well as criteria for selection of the contents.
- Continuous updating of the Portfolio as the child grows.
- Careful structuring of Portfolio material accompanied by a reflective account.
- Clear labeling and numbering of content for easy reference.

## 6. Narrative records

Teacher /child peers write a narrative description of the learner's experiences. These give the opportunity for exploring every aspect of the child's life and can be used with anecdotal evidences for creating a more holistic image of the learner and can be used to develop Cumulative Records

## 7. Photographs

Provides documentation of a learner's experiences, while they are doing tasks/work. They could also be of finished products, projects models etc.

### 7.1 Advantages of Photographs

- Provided accurate recall of events.
- Provides an insight into children's ways of thinking and interacting.
- Facilitates sharing of information with families.
- Provides an insight into the child's emotional, social and psychological aspects of development.





## 7.2 Concern Regarding Photographs

- The aesthetic quality may not be critical.
- Avoid making the child self-conscious in front of the camera by your comments or suggestions.

## 7.3 Suggestions for implementing Photographs

- Careful selections of what to record. Subsequent analysis is necessary.
- Giving children time to get familiar and feel at ease with the equipment is a good idea.

## 8. Paintings and other examples of artistic endeavour

Provides evidence of a learner's abilities, thoughts and attitudes. Finished products, project models etc. can be incorporated into the child's Portfolio to provide evidence of the learner's ability.

## 9. Videos

Provides documentation of a learner's experiences, while they are task /engaged with a project. They could also be of finished products, projects models etc.

### 9.1 Advantages of Videos

- Both allow language and the way it is used to be '*captured*' with accuracy.
- Movement and sound add to the understanding of the events taking place.
- Helps to understand student's explanations that indicate different ways of thinking.

### 9.2 Concern regarding Videos

- Analysis is time consuming,
- Children may occasionally be '*performing*' for the camera.
- Expensive as it requires technical expertise.

### 9.3 Suggestion for implementation of Videos

- Careful selections of what to record and subsequent analysis is necessary.
- Giving children time to get familiar and feel at ease with the equipment is a good idea.



## 10. Rating Scales

By a rating is meant the judgment of one person by another. Rating is a term applied to expression of opinion or judgment regarding some situation, object or character. Opinions are usually expressed on a scale or values. Rating techniques are devices by which such judgments may be quantified.

A rating scale is a method by which we systematize the expression of opinion concerning a trait. The ratings are done by parents, teachers, a board of interviewers and judges and by the self as well.

There are two characteristics of a rating scale.

- Description of the characteristics to be rated, and
- Some methods by which the quality, frequency or importance of each item to be rated may be given.

Provide a comparative record of the learner's level of achievement can prove to be counterproductive. They should be used judiciously and discreetly.

## 11. Anecdotal Records

An Anecdotal Record is the observed behavior of a child. It is defined as a record of some significant item of conduct, a record of an episode in the life of the student; a word picture of the student in action,..... a word snapshot at the moment of the incident; any narration of events in which the student takes such a part as to reveal something which may be significant about his personality.

Anecdotal record is a running cumulative description of actual examples of behavior as observed by teachers and counsellor. The description of the behavior is followed by a comment by the teacher. An example will make it clear:

### 11.1 Example of an Anecdotal Record

**Place:** English class.

**Objective Description:** I have been finding Ravi/Rashida day after day in the library reading magazines, yet she/he never has time to correct revise/edit or to work carefully on English assignments.

**Comment:** Ravi/Rashida does not like to write but likes to read. I have asked the librarian not to admit him/her during his/her free periods unless he hears from me that Ravi/Rashida has done all work regarding assignments.





## 11.2 Guidelines for the Preparation and Use of Records

We cannot set any limit on the number of anecdotes to be recorded. It depends upon the time which is at the disposal of the teachers or counsellors. The following points should be considered in connection with these records:

- These supplement other records and should not be considered as substitutes.
- The objective description of the behavior should not be mixed up with the subjective comments.
- Any significant behavior, be it in the classroom, in the school or outside the school, should be recorded.
- Behavior, whether it is favourable, unfavourable or neither favourable nor unfavourable to the child, should be recorded.
- The facts presented in all the anecdotes must be shifted and arranged so that they may be studied in relation to one another.
- The record should be regarded as confidential. It should not fall into irresponsible hands.

## 11.3 Specimen of an Anecdotal Record

Name of the school	
Name of pupil observed	Class
Observer	Date and Place
Objective Description _____	Comments of the Observer _____

## 11.4 Values and Uses of Anecdotal Records

- They provide specific description of personality and minimize generalizations.
- They are very helpful in understanding the child's behavior in diverse situations.
- They provide a continuous record.
- They provide data for learners to use in self-appraisal.



- A summary of these records is valuable for forwarding with a pupil when he is transferred from one school to another.
- The new members of the staff may use these records and acquaint themselves with the student body.
- These records aid in clinical service.
- They stimulate teachers to use the records.

## **12. Essays etc.**

Provides evidence of a learner's abilities related to expression mirroring one's, abilities, thoughts and attitudes. Finished products, project models etc. can be incorporated into the learner's Portfolio to provide evidence of the learner's ability.

## **13. Student interviews and oral tests.**

- Allows the learner to participate in the learning assessment process.
- These can test abilities like pronunciation, intonation, accent.
- Students cannot dodge the examiners as they can be cross questioned.
- Oral tests should not test the items which can be tested through written examination.
- Oral tests being individual are time consuming.

## **14. Self Assessment Sheets**

Can be incorporated into the learner's Portfolio to provide evidence of the learner's self evaluation.

## **15. Peer Assessment Sheets**

Excellent for assessing in team/group based activities, social projects and peer related behavior. Can be incorporated into the learner's Portfolio to provide evidence of the learner's social life skills.

## **16. Student Reporting Papers - Feedback forms**

Excellent for getting feedback from the student on the school, the teaching learning process and the learner's attitudes to particular aspects of their education. Can be incorporated into the learner's Portfolio.





### 17. Conversations

Helps us learn what/how the learner thinks, knows and imagines. Helps to test listening and speaking skills.

### 18. Examination, Tests, Quizzes, Competitions

Tells us how well a learner remembers what he has been taught and what he has learnt.

### 19. Narrative Reports

The idea should not be to reduce the learner to a set of letters. They can give a more comprehensive report of the learner in a holistic manner. Reports can be incorporated into Portfolios.

However no single assessment tool/method is capable of providing information/evidence about learner's progress and learning in different areas of development. While teaching, a teacher realises that a lot can be understood from *observing learners, listening to them, discussing informally with their peers and parents as well as talking to other teachers, reviewing written work (class work and homework) done by learner and using self assessments by them*. Teachers use different methods. All that is required is that a judicious and predictable combination of various tools be adopted to give as accurate information about the child as possible.

Advantages, concerns and suggestions for implementation of some of these tools are given in the outline for CCE *Annexure 1*.

It is proposed that this ***Certificate of School Based Assessment*** should be awarded to each student at the end of class X by the Head of the institution to certify the level of achievement and growth in both scholastic and co-scholastic areas.

The assessment in co-scholastic aspects of learner growth employs largely observation techniques. **Anecdotal records, health records, attendance** and **grading scales** are the major tools of assessment.

For the assessment of learners performance in co-scholastic activities (Groups 3(A) and 3(B)), fairly detailed procedures have been developed to ensure objectivity and uniformity. *Each activity has been divided into 3-5 components and a Grading Scale has been developed for each component (Annexure-3:)* To assess a student in any particular activity, the teacher observes him either for a long time or provides competitive situations for displaying his/her acquired traits of the trade. He rates the learner once in each term (twice / in a session) on each component and enters the average ratings or final grade in the CCE card. This final grade is mentioned in the Cumulative Record Form. (*Certificate of School Based Assessment*)

The CCE Certificate is issued by the School to all the students passing the secondary examination.



The CCE scheme emphasizes objective based instruction in Scholastic and Co-Scholastic areas using assessment as a means to ensure steady growth towards the fulfillment of the pre-planned objectives.

The *Teachers Manual on School Based Assessment* brought out by the Board emphasizes this and provides detailed information on planning, organization and implementation of the scheme. It includes instructions regarding assessment procedures and also emphasizes the need for recording, interpreting and using the data on various aspects of learner growth in order to provide feed-back to the entire programme. Thus, the basic theme of the scheme includes objective based instruction, continuous evaluation, diagnostic testing and remedial instruction in all areas of learner growth.

Students will be evaluated only when any evidences worth mentioning are available on the basis of observation in respect of one or more of the traits.

In order to make the evaluation comprehensive, CCE attempts to cover every relevant aspect of a child's personality, behaviour and performance within diverse learning situations. It respects the cardinal principle of holistic development by covering the cognitive, affective and psychomotor domains, so that the head, the heart and the hand are harmoniously developed. Thus it incorporates both scholastic and co-scholastic aspects of education. Besides subjects like languages, Social Science, Mathematics, Science, Physical and Health Education, Work Experience, Art Education and Computer Studies, a student is also assessed for Life Skills, attitudes and values and participation in different co-curricular outdoor activities.

The essential element implies that evaluation of growth is to be done both continuously and comprehensively. This will help in the identification of the strengths and weaknesses of learners. Thereafter, decisions about necessary input and steps to bring about the desired growth are taken. Evaluation thus becomes a means to an end and not an end in itself.

CCE, in addition to stimulating the learner' scholastic growth, aims at promoting physical health, developing in learners' Life Skills, building desired attitudes, helping the cultivation of interests and providing opportunities to participate and acquire proficiencies in various Co-Curricular activities.





*To make inclusive education possible, and to better accommodate students with different learning abilities, the present education system, educational practices need to become more flexible, more inclusive and more collaborative.*

*Education of Children with Special Needs, NCERT*

# Chapter 6

## Implications for Schools

### 1. Role of Teachers

Examination systems today are complex. They meet the requirements of many stakeholders and multiplicity of functions. The purpose of an examination may variously be one of certification or of selection, of institutional accountability or to provide an instrument of social change.

More often it is indeed an amalgam of many functions. Those who engage in educational reform must take account of the full range of stakeholder requirements and ensure that a degree of coherence in those requirements has been achieved.

Reforms which encourage school-based assessment, create new pressures of accountability and place greater reliance on the professional judgement of teachers. Pedagogies which work in one educational context - perhaps with more generous resourcing levels and optimum class sizes are not necessarily transposable into other contexts. A rich dialogue between policy makers and teachers is required to ensure effective implementation. Opportunities for professional development, for in-service training and for guidance via the production of exemplar materials and handbooks become vital. Educational reforms which call for new pedagogies - the incorporation of ICT into the curriculum, say, and the encouragement of e-learning are possible only by large-scale commitment to training for teachers.

Modes of assessment emphasizes investigative approaches to learning and the application of skills, knowledge and understanding. The approach recognizes that '*recall*' becomes a relatively less useful skill for individuals in today's world of rapid change - instead *understanding, applying, analyzing, evaluating* and *creating* - the higher order skills of a reworked Bloom's taxonomy become more relevant.

Of all those involved in children's education. it is the teachers who feel the most responsible. This is expressed in their desire to help all children acquire knowledge, skills, positive attitudes and values and face life with confidence. In order to find out how children are doing in schools, teachers spend a lot of time in assessing children. Most teachers view assessment as an important part in their daily school routine and thus this is a very important part of what they do on a daily basis. Why is this so?

Teachers give a number of reasons for this. One important reason is that it is necessary to know if the child has learnt what she/he was expected to have learnt. The second is to find out what is the child's progress over a certain period of time. However, there is a third reason that has been given more attention by not only teachers but all of us as well i.e. finding out what the child has achieved in different subject areas. This could be because we are all



concerned about providing 'good quality' education and feel that one way of making sure this is happening is by evaluating the child's achievement in the subjects being taught through tests and exams. Testing has its own purpose but if we really want to help children learn better, we need to consider what do marks or grades obtained by children through tests or exams actually tell us about a child's learning or progress.

While assessing children it is important to appreciate differences amongst them and respect the fact that they will understand and respond in different ways while learning.

Children are not 'empty vessels' or 'blank slates', to be filled up with information and knowledge that only the school can give, as is generally believed. It is important to build on experiences that a child brings to school. New learning is thus to be developed needs to be based on what the child already knows and understands.

#### **Some important aspects are that-**

- Every child can learn if allowed to do so at her/his own pace and follow her/his own way of learning.
- Children learn more through play/activities and learn better from each other and if they actually 'do' things.
- Learning is a continuous process. Thus, children's learning does not take place in the school. Therefore, classroom learning should be linked to what happens outside the classroom and at home.
- Children 'construct' their own knowledge and do not only learn when and what the teacher teaches. This means that every child makes sense of what information he/she is exposed to based on his/her previous experiences and learning. Only then does the child arrive at his/her own understanding and conclusions. Each child has a unique approach to acquiring knowledge. This process goes on continuously.
- Children at the primary stage learn better and more easily through experiences, play, exploration, trying out various things and actually 'doing' different activities.
- Children learn in a spiral and not a linear way. Thus revisiting concepts again and again helps them to understand better. The act of learning involves a process of establishing connections among facts observed/ experienced or realized by children. The new learning, therefore, is to be based not only on the preceding facts and information but could be related even to things acquired long back in school, home or elsewhere. Hence, learning does not proceed in a linear manner.
- Children learn through the mistakes and errors they make.
- Learning takes place in a holistic manner, thus, an integrated approach to learning is better.

Source: NCERT



Assessment of the outcomes of learning goes along with the teaching-learning process in a continuous manner. In order to undertake a holistic assessment, all aspects of learning need to be given due recognition. The manner and modalities however may vary. While teachers are regularly observing the progress of children some periodicity would be necessary. It implies maintaining a profile for each child. This is required in order to reflect upon, derive feedback, plan and implement measures to enrich and enhance children's learning. This will call for a judicious cycle to be followed. One cannot undermine the fact that while informal observations continue, fortnightly looking back and quarterly reviews are generally recommended to promote and enhance learning among children.

#### **Thus assessment may be on:**

- **Daily basis**- interacting with children and continuously assessing them both in situations inside and outside the classroom.
- **Periodic**- once in every 3 to 4 months, teachers may check and reflect on the information collected. This however should not be in the form of a test/exam but for purposes of reflection.

## **2 Methods of Assessment**

Before choosing any method it is necessary to decide the kind of arrangement that is best suited for the type of information needed. There are four basic methods of organizing assessments, namely:

- **Individual assessment** - which focuses on one child while she/he is doing an activity/task and thus recognises individual work and accomplishments.
- **Group assessment** - which focuses on the learning and progress of a group of children working on a task together with the objective of completing it. This method of organization is found to be more useful in order to assess social skills, co-operative learning processes and other value related dimensions of a child's behaviour.
- **Self-assessment** - refers to the child's own assessment of her/his learning and progress in knowledge, skills, processes, interests, attitudes etc.
- **Peer-assessment** - refers to one child assessing other children. This can be conducted in pairs or in groups.

What is observed across all schools is that during assessment the most commonly used methods are those developed by teachers themselves. Among these are **paper-pencil tests/tasks, written** and **oral tests, questions on**





**pictures, stimulated activities** and **conversations with students**. Small class tests are used by most teachers as a quick and easy way of assessing the learning progress of children. These are generally conducted at the end of a unit/ month. No doubt these are useful but they need to be used carefully. The kind of questions and items used should, as far as possible, not have predetermined answers but be worded in ways so that children have space to generate and express individual thoughts and ideas in a variety of ways. Test items that promote thinking and analysis rather than recall of textbook material need to be included. Put simply, items should provide the scope for a variety of responses from children.

### **3 It is Possible-You can make it happen**

Assessment can become a useful and interesting process. To realize this you need to be careful about:

- Being clear about why you are assessing the child.
- Not labeling children as, *slow, poor, intelligent, dull* on *making comparisons between children*.
- Using a variety of ways to collect information about the child's learning and progress in subjects and across curricular boundaries.
- Collecting information continuously and recording the same.
- Giving importance to each child's way of responding and learning and the time it takes to do so.
- Reporting on ongoing, continuous basis and being sensitive to every child's responses.
- Not making negative statements or using technical language during assessment or while providing feedback to the child, parents or others.
- Providing feedback in clear and simple language, which will lead to positive action and help the child to do better.

### **4 Inclusive classroom**

A school can deal with the differently abled students by forming teams consisting of the school Counsellor, class teacher and peer mentor or buddy. Given below are two Case Studies which have helped differently-abled children.



### CASE STUDY - I

Ratish is a bright child with a range of interests and strengths. He joined a school in Class VII in 2008. He at that time felt vulnerable, frustrated and used to give up any attempt to learn.

#### Attention / Concentration

##### Status Entry

- His attention / concentration went through huge fluctuations.

##### Interventions

- He was made to focus on tasks by using various strategies / aids / repetition and reminders.

##### Current Status

- He showed lack of interest when the task was too long.

### Social / Emotional

##### Status

- When he joined he was hardly audible, unable to understand social subtleties.

##### Interventions

- Here the team (*teachers, educators, Buddy*) helped him in making and keeping friends.

##### Current status

- Now he interacts and communicates with others in verbal and non verbal ways.

##### Verbal

- Small - talk / conversation
- Sharing jokes
- Sharing / discussing (Sports / Music / Movies / Cartoons)

##### Non Verbal

- Active Listening
- Body Language

He also participated in the school Dramatics Club and is an involved member.





### Self Esteem

As self esteem is a basic human need and it makes an essential contribution to life process, Ratish lacked self worth as he did not get enough support of his family. He is quite self confident now.

### Academic

Ratish is a good visual learner.

- He is encouraged to do the writing work in the school.
- He is helped by frequent reminders by the school team (*teachers / educator/ buddy*). He is made to proof read the test before submitting.
- He is given consistent support and intervention (*Structured remedial plans in the form of flow charts notes / webs charts*)
- He still needs direct instructions and extensive guidance.

YEAR 2008 :            To motivate Ratish, he was assessed on 60% oral and 40% written for one complete (VII) academic year.

YEAR 2009 :            This year he was made to do the class syllabus completely but will be reassessed if (VIII) he is not able to clear the modified paper of the same level.

### Case Study-II

This concern Shantanu a case of Cerebral Palsy

Shantanu - (CP) - Cerebral Palsy Spastic.

Shantanu is hard working and a responsible child. He has the potential as he has good cognitive skills / abilities.

### Concentration

- He is able to focus on the task.
- " He needs instructions and support in learning.
- " He has poor management skills.



### **Behaviour**

- An attention seeker.
- Sometimes lazy and does not work want to hard
- When ever found idle, he is seen sucking his thumb.

### **Social/ Emotional**

He is very verbal and interacts with his peers. He interacts and communicates in both verbal and non verbal ways.

### **Self Esteem**

Earlier he was not very confident but can now exchange ideas and can talk about himself. (*teachers / others*)

### **Academic**

#### **Current Status**

- He was able to do the mainstream syllabus.

#### **Interventions**

- He was helped with a few modified papers to make it easier.
- The modified papers can be of the same level if required.

He is given consistent support and intervention in the form of Remedial teaching

## **5. Assessing Co-Scholastic Aspects**

**All teachers need to be involved in Assessing C0-Scholastic Skills of children.**

### **Why should Students be Assessed by other teachers in addition to the Class Teacher?**

- Reduces Subjectivity
- Makes all teachers involved
- Makes all teachers accountable.
- Removes Biases
- Distributes work load among teacher
- Reduces the work load of the class teacher
- Simplifies work with regularly maintained record (on computer)
- Provides a point of reference to all teachers.





### HOW should Assessment be done?

- Record - Format of form
- Collation by class teacher

### Record Keeping for Co-Scholastic Skills

#### STUDENT ASSESSMENT FORM

(Academic Year - \_\_\_\_\_)

Name of Child : \_\_\_\_\_

Roll No.: \_\_\_\_\_

#### Teacher's Remarks :

Scholastic B

Work Experience :

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---

Art Education :

---

---

Physical Education :

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---

#### Co - Scholastic Skills

Activity Incharge \_\_\_\_\_



1. Creative/Literary :

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2. Scientific :

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3. Performing Art :

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4. Club Incharge :

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Class Teacher's Remarks (Life Skills & Attitudes Values )

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Name and Signature of the Class Teacher

**Note :** Record of students should be kept for a period of ten years by the school.





## 6. Empowerment of Teachers

### Orientation of teachers

No educational scheme can succeed unless the teachers are adequately prepared for executing it and have faith in it is worth. This preparation will presume the visualization of a realistic scheme and the development of comprehensive procedures for its operational implementation. Teachers need to be provided orientation about the scheme. For providing orientation trained resource persons need to be created.

The content of such training/orientation programmes, has to incorporate both the scholastic and co-scholastic areas of learners' growth. The development of improved evaluation tools and their appropriate use, is an important aspect of these courses. In respect of the scholastic areas, this could mean the preparation of objective -based questions and balanced question papers, scoring of scripts and analysis and declaration of results. In regard to the co-scholastic areas, those courses will need to cover the preparation and use of rating scales, inventories, checklists, schedules and the procedures of assessing different areas of skills though them. Training in methods of collecting, recording, compiling and interpreting evidences of learners growth will be other crucial aspects of these training programmes.