Measurement, Assessment & Evaluation

Measurement

- **According to Norman E Ground (1985):**

    "Measurement is the process of obtaining a numarical description of the degree to which an individual possesses a particular characteristic."

- **According to Ebel & Frisbie (1991):**

    "Measurement is the process of assigning numbers to individuals or their characteristics according to specified rules."

Assessment

- **According to Murry Print (1993):**

    "Assessment involves the interpretation of measurement data .It makes sense of the data collected on student performance."

- **According to Dictionary of Education (1989):**

    "Assessment is the process whereby one attempts to measure the quality and quantity of learning and teaching using various assessment techniques."

Evaluation

- "A systematic process of determining what the actual outcomes are but it also involves judgment of desirability of whatever outcomes are demonstrated." (Travers, 1955)
- " The process of delineating, obtaining and providing useful information for judging decision alternatives" (Stufflebeam et al 1971)

Assessment for learning

- comprises two phases—initial or diagnostic assessment and formative assessment
- assessment can be based on a variety of information sources (e.g., portfolios, works in progress, teacher observation, conversation)
- verbal or written feedback to the student is primarily descriptive and emphasizes strengths, identifies challenges, and points to next steps
- as teachers check on understanding they adjust their instruction to keep students on track
- no grades or scores are given - record-keeping is primarily anecdotal and descriptive
- occurs throughout the learning process, from the outset of the course of study to the time of summative assessment

Assessment as learning

- begins as students become aware of the goals of instruction and the criteria for performance

- involves goal-setting, monitoring progress, and reflecting on results

- implies student ownership and responsibility for moving his or her thinking forward (metacognition)

- occurs throughout the learning process

Assessment of learning

- assessment that is accompanied by a number or letter grade (summative)

- compares one student's achievement with standards

- results can be communicated to the student and parents

- occurs at the end of the learning unit

FORMATIVE EVALUATION

- **<u>Definition</u>**: Evaluation taken at varying interval throughout a course to provide information and feedback that will help improve the quality of student learning and the quality of the course itself.

- **<u>Goal</u>**: To monitor student learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning.

- **<u>Example</u>**: Asking students to submit 1 or 2 sentences identifying the main point of a lecture.

SUMMATIVE EVALUATION

- **Definition**: Evaluation taken by students at the end of a unit or semester to demonstrate the 'sum' of what they have and have not learned.

- **Goal**: To evaluate student learning at the end of an instructional unit by comparing it against some standard or benchmark.

- **Example**: Assigning marks or a grade to a final exam.

DIFFERENCE BETWEEN FORMATIVE AND SUMMATIVE EVALUATION

| INDICATORS	FORMATIVE	SUMMATIVE
Goal	The goal of formative assessment is to improve	The goal of summative assessment is to prove
Purpose	To enhance learning	To make judgements about students' performance
Relation to instruction	Occurs during instruction	Occurs after instruction
Frequency	Occurs on a continuous basis (daily)	Occurs at a particular point of time to determine what students know
Role	To improve learning allows teachers to make decisions and monitor their instructions based on students' performance	To predict & judge students' performance, give grades and determine if the content being taught was retained

DIFFERENCE BETWEEN FORMATIVE AND SUMMATIVE EVALUATION

INDICATOR	FORMATIVE	SUMMATIVE
Role of students	Active involvement	Passive Involvement
Examples	Observations, interviews, evidence from work samples, etc	Common assessments like tests and exams
Design	Designed to adjust teaching and learning while they are still occurring	Designed to provide information about the amount of learning that has occurred at a particular time
Means of testing	Quiz, interviews, conversations, visual and oral testing, projects, practicals and assignments, etc.	Assessment in the form of pen-paper test mostly
Evaluation	Done to improve or change a program while it is in progress	Focuses on the results or outcomes of a program
Grading	Scored but not graded	Graded

The Purposes of Evaluation

According to Oguniyi (1984)

- To determine the relative effectiveness of the programme in terms of students' behavioural output;

- To make reliable decisions about educational planning;

- To identify studaents' growth or lack of growth in acquiring desirable knowledge, skills, attitudes and societal values;

- To help teachers determine the effectiveness of their teaching techniques and learning materials;

- To help motivate students

- To identify problems

- To predict the general trend in the development of the teaching-learning process;
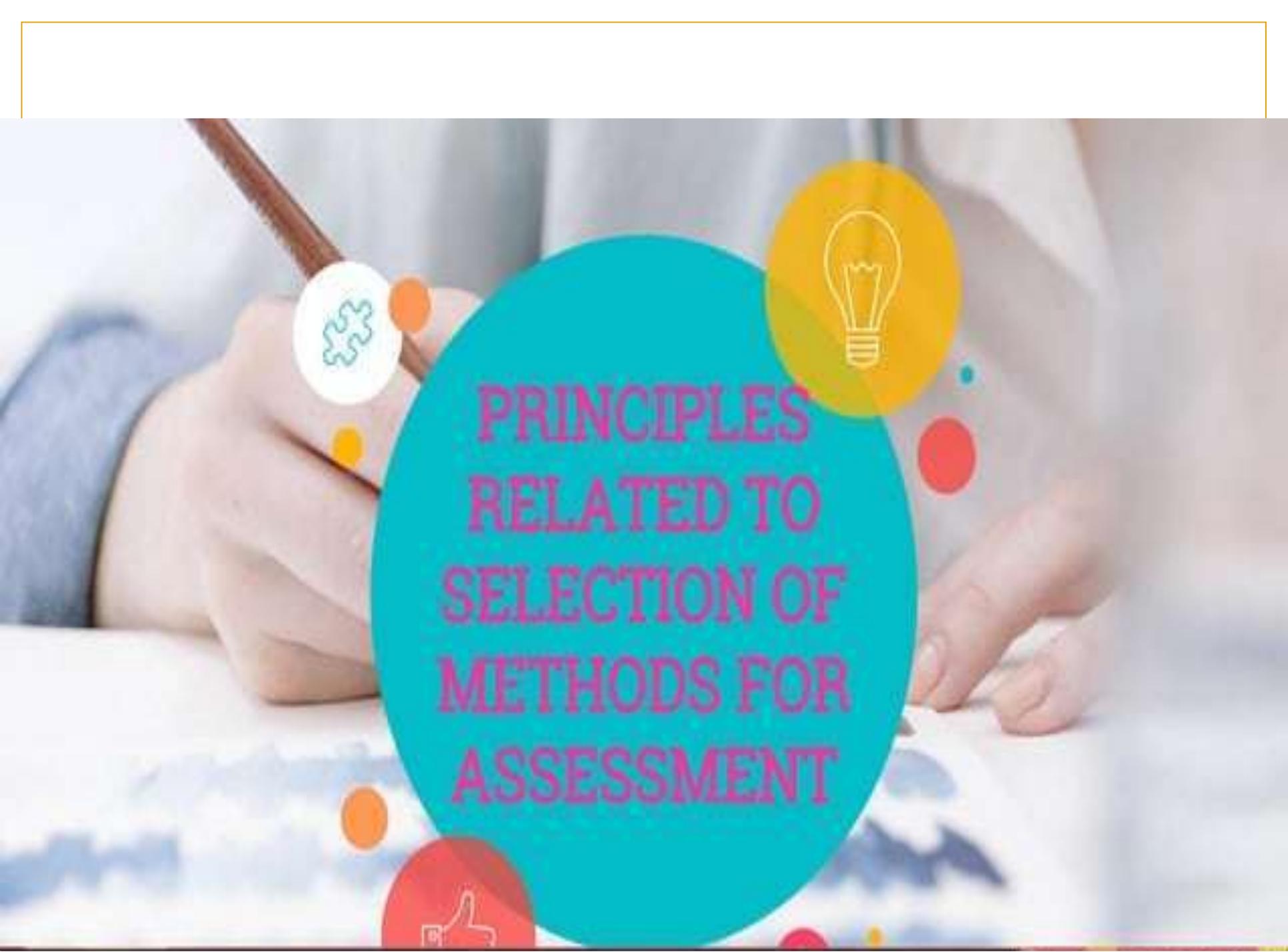
PRINCIPLES RELATED TO SELECTION OF METHODS FOR ASSESSMENT

It is organized around five interrelated themes:

I. Developing and Choosing Methods for Assessment

II. Collecting Assessment Information

III. Judging and Scoring Student Performance

IV. Summarizing and Interpreting Results

V. Reporting Assessment Findings

Developing and Choosing Methods for Assessment

1. It is chosen so that inferences drawn from the knowledge, skills, attitudes, and behaviours possessed by each student are valid and not open to misunderstanding.

2. In this methods should be clearly related to the goals and objectives of instruction, and be compatible with the instructional approaches used.

3. When developing or choosing assessment methods, consideration should be given to the consequences of the decisions to be made in light of the obtained information.

4. More than one assessment method should be used to ensure comprehensive and consistent indications of student
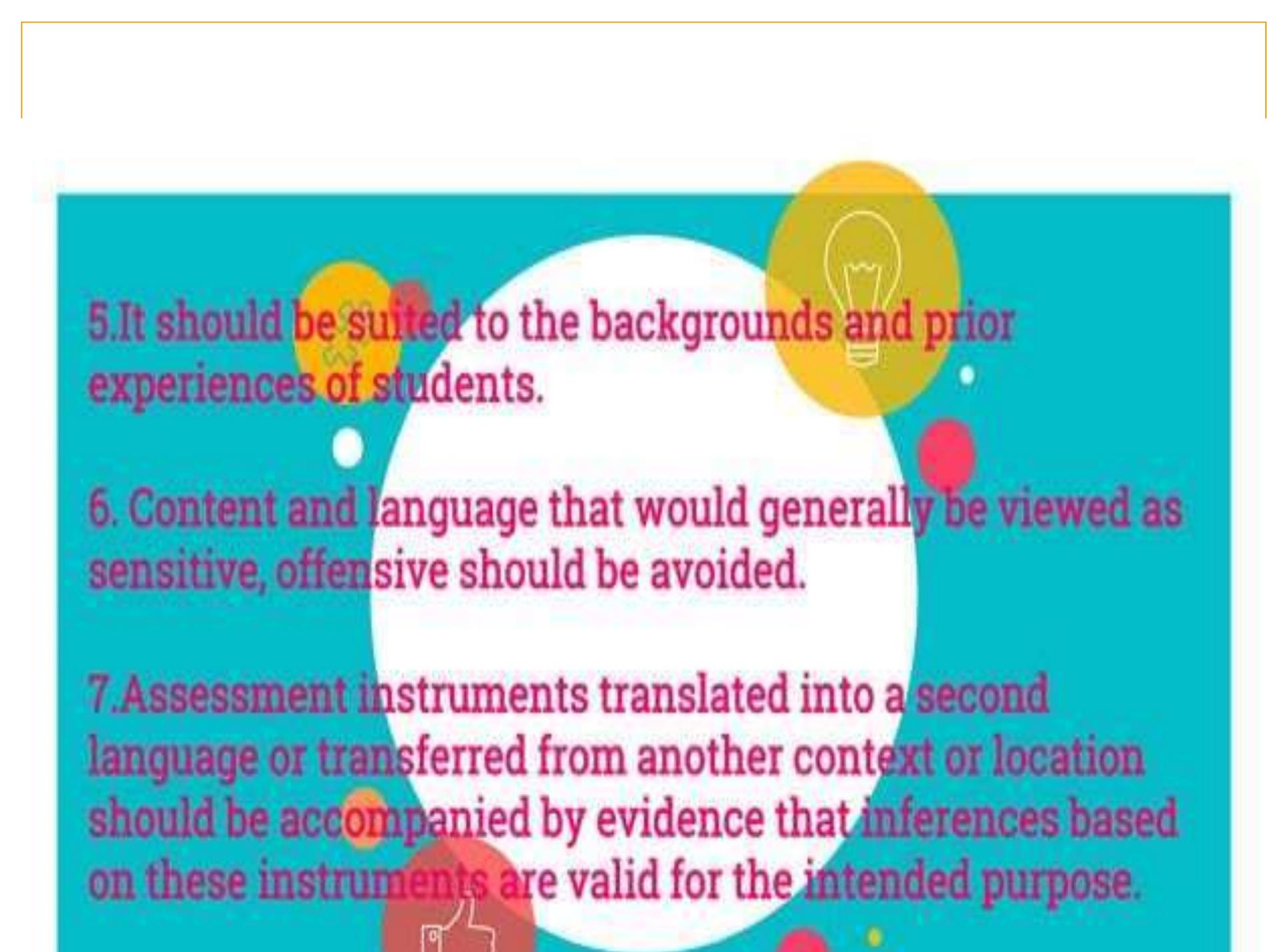
5.It should be suited to the backgrounds and prior experiences of students.

6. Content and language that would generally be viewed as sensitive, offensive should be avoided.

7.Assessment instruments translated into a second language or transferred from another context or location should be accompanied by evidence that inferences based on these instruments are valid for the intended purpose.

Collecting Assessment Information

1. Students should be told why assessment information is being collected and how this Information will be used.

2. An assessment procedure should be used under conditions suitable to its purpose and form.

3. In assessments involving observations, checklists, or rating scales, the number of characteristics to be assessed at one time should be small enough and concretely described so that the observations can be made accurately.

4. The directions provided to students should be clear, complete, and appropriate for the ability, age and grade level of the students.
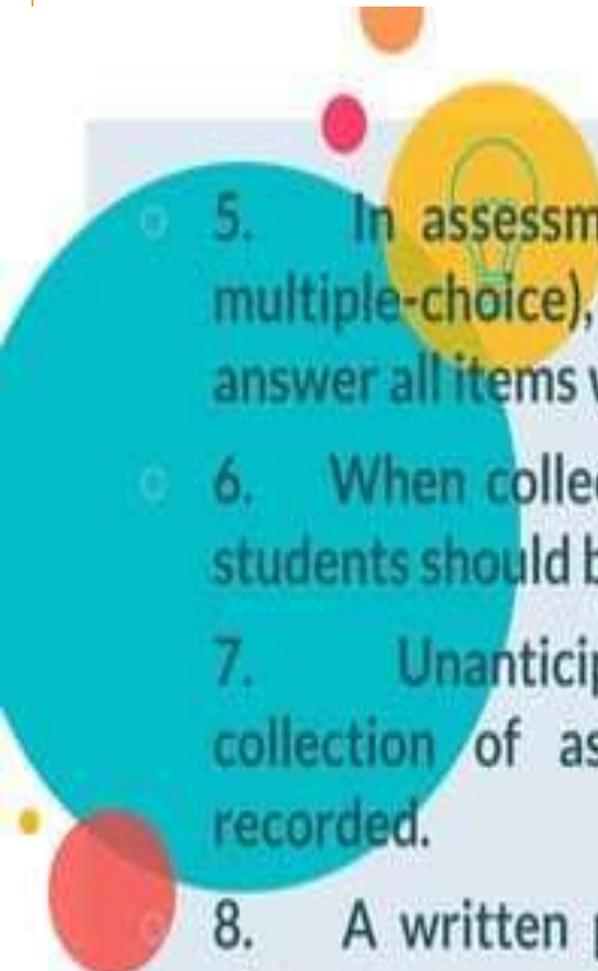
5.   In assessments involving selection items (e.g., true-false, multiple-choice), the directions should encourage students to answer all items without a threat of penalty.

6.   When collecting assessment information, interactions with students should be appropriate and consistent.

7.   Unanticipated circumstances that interfere with the collection of assessment information should be noted and recorded.

8.   A written policy should guide decisions about the use of alternate procedures for collecting assessment information from students with special needs and students whose proficiency in the language of instruction is inadequate for them to respond in an anticipated manner.

Judging and Scoring Student Performance

1. Before an assessment method is used, a procedure for scoring should be prepared to guide the process of judging the quality of a performance or product, the appropriateness of an attitude or behaviour, or the correctness of an answer.

2. Before an assessment method is used, students should be told how their responses or the information they provide will be judged or scored.

3. Care should be taken to ensure that results are not influenced by factors that are not relevant to the purpose of the assessment.
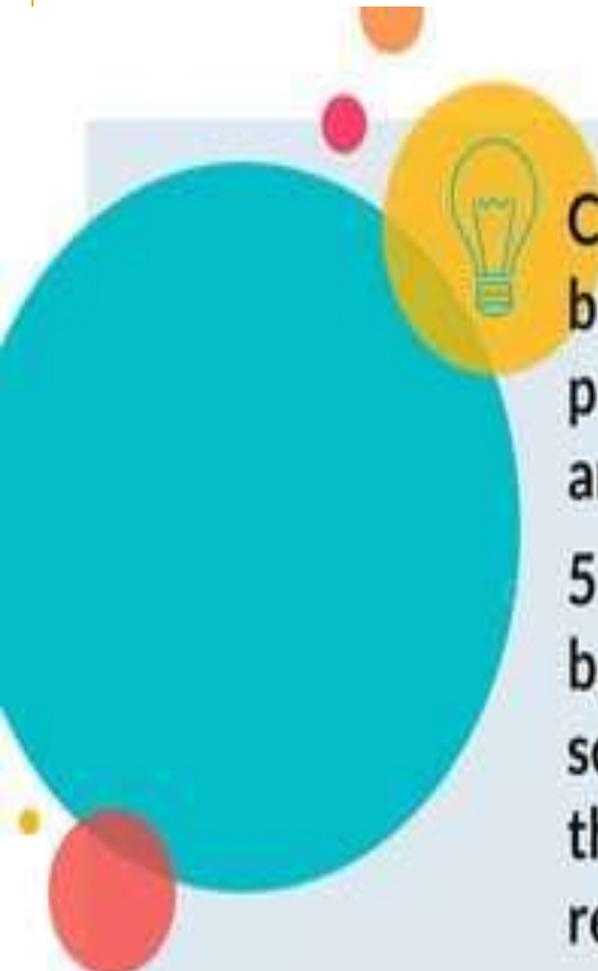
Comments formed as part of scoring should be based on the responses made by the students and presented in a way that students can understand and use them.

5. Any changes made during scoring should be based upon a demonstrated problem with the initial scoring procedure. The modified procedure should then be used to restore all previously scored responses.

6. An appeal process should be described to students at the beginning of each school year or course of instruction that they may use to appeal a
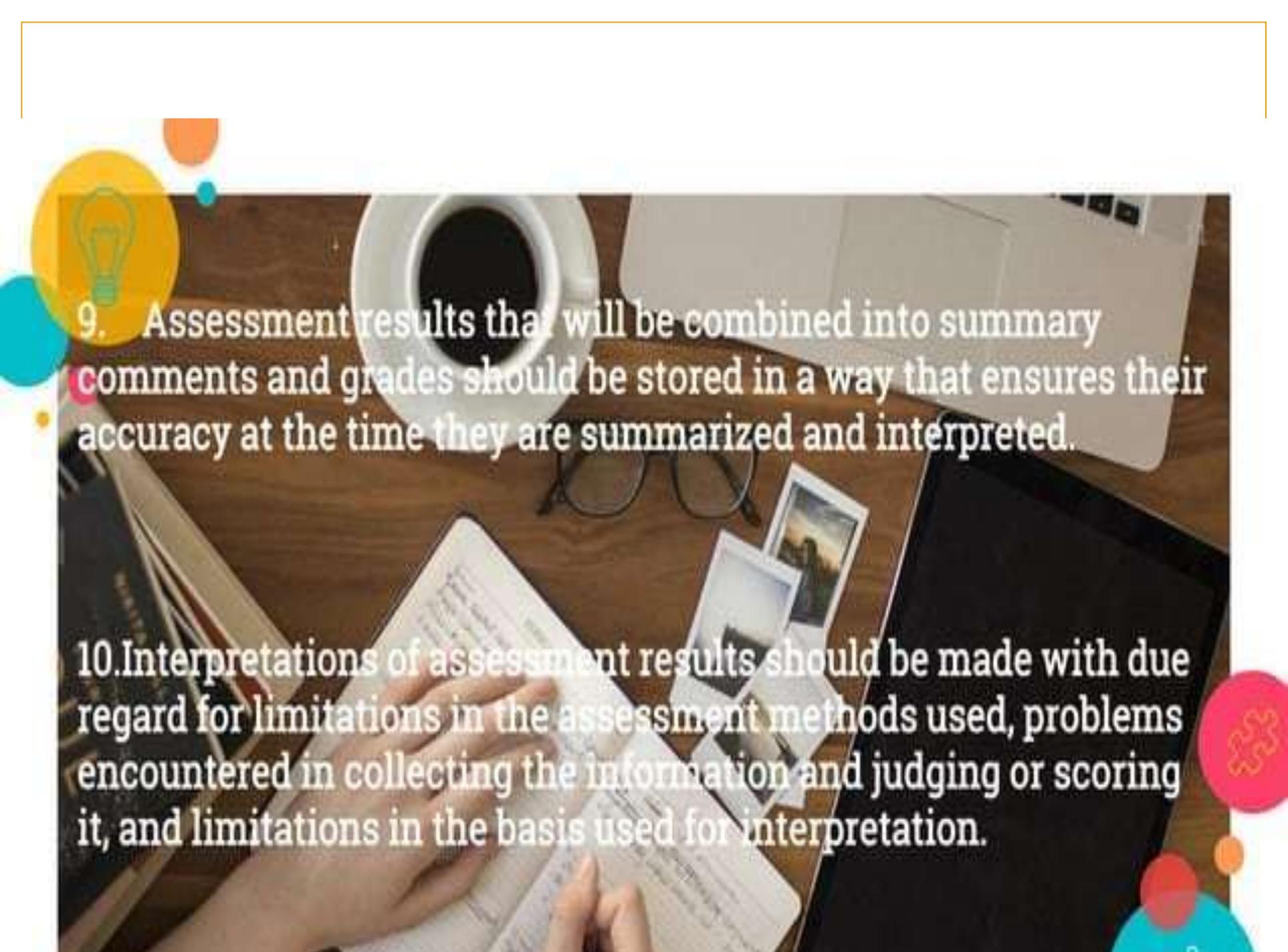
Summarizing and Interpreting Results

1. It is for a reporting period should be guided by a written policy.

2. It should be explained to students and their parents/guardians.

3. individual results used and the process followed in deriving summary comments and grades should be described in sufficient detail so that the meaning of a summary comment or grade is clear
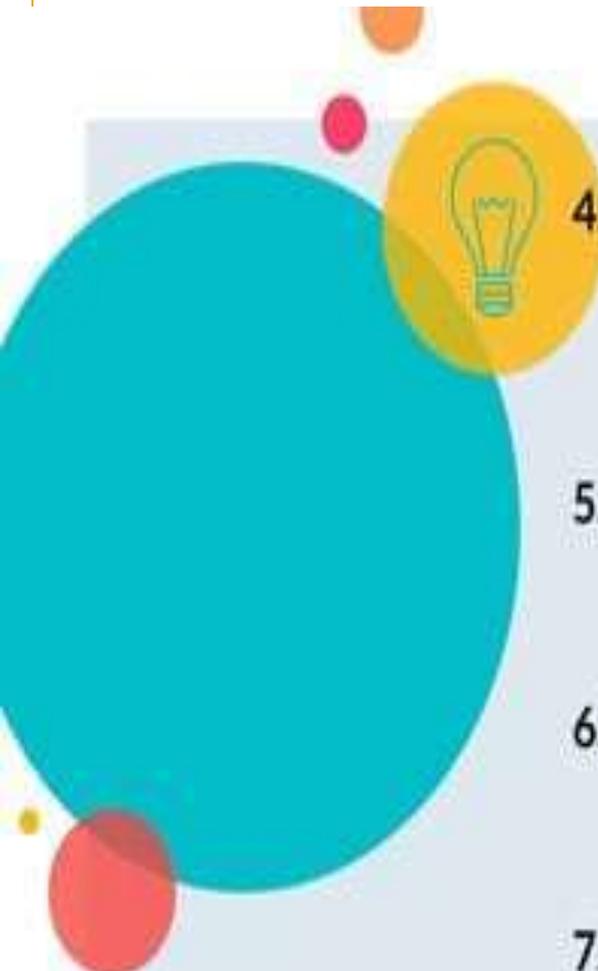
4. Combining disparate kinds of results into a single summary should be done cautiously. To the extent possible, achievement, effort, participation, and other behaviours should be graded separately.

5. Summary comments and grades should be based on more than one assessment result so as to ensure adequate sampling of broadly defined learning outcomes

6. The results used to produce summary comments and grades should be combined in a way that ensures that each result receives its intended emphasis or weight.

7. The basis for interpretation should be carefully described and justified.

8. Interpretations of assessment results should take account of the backgrounds and learning experiences of the students.

9. Assessment results that will be combined into summary comments and grades should be stored in a way that ensures their accuracy at the time they are summarized and interpreted.

10. Interpretations of assessment results should be made with due regard for limitations in the assessment methods used, problems encountered in collecting the information and judging or scoring it, and limitations in the basis used for interpretation.

Reporting Assessment Findings

1. Elements to consider include such aspects as audiences, medium, format, content, level of detail, frequency, timing, and confidentiality.

. 2. Written and oral reports should contain a description of the goals and objectives of instruction to which the assessments are referenced.

3. Reports should be complete in their descriptions of the strengths and weaknesses of students so that strengths can be built upon and problem areas

4. The reporting system should provide for conferences between[13] teachers and parents/guardians. Whenever it is appropriate, students should participate in these conferences.

5. An appeal process should be described to students and their parents/guardians at the beginning of each school year or course of instruction that they may use to appeal report.

6. Access to assessment information should be governed by a written policy that is consistent with applicable laws and with basic principles of fairness and human rights.

7. Transfer of assessment information from one school to another should be guided by a written policy with stringent provisions ensure the maintenance of confidentiality.