



Performance Assessment, Review, and
Analysis of Knowledge for Holistic Development

Standardization of Question Paper Template for Enabling the Equivalence in Assessment

Key Initiatives

Large-Scale
Assessment
s

National Achievement Survey
PARAKH Rashtriya Sarvekshan 2024
Foundational Learning Study

Establishing
SSSA

[Click here to explore more!](#)

Holistic Approach
to Learning and
Assessments

[Click here to explore more!](#)

Equivalence
of Boards

[Click here to explore more!](#)

Let's Warm up!!

Why?

- NEP 2020 [[Section 4.41](#)] proposes establishing equivalence across school education boards to improve standards and promote educational equity.
- Equity in education cannot achieve the desired results without quality assessment system.

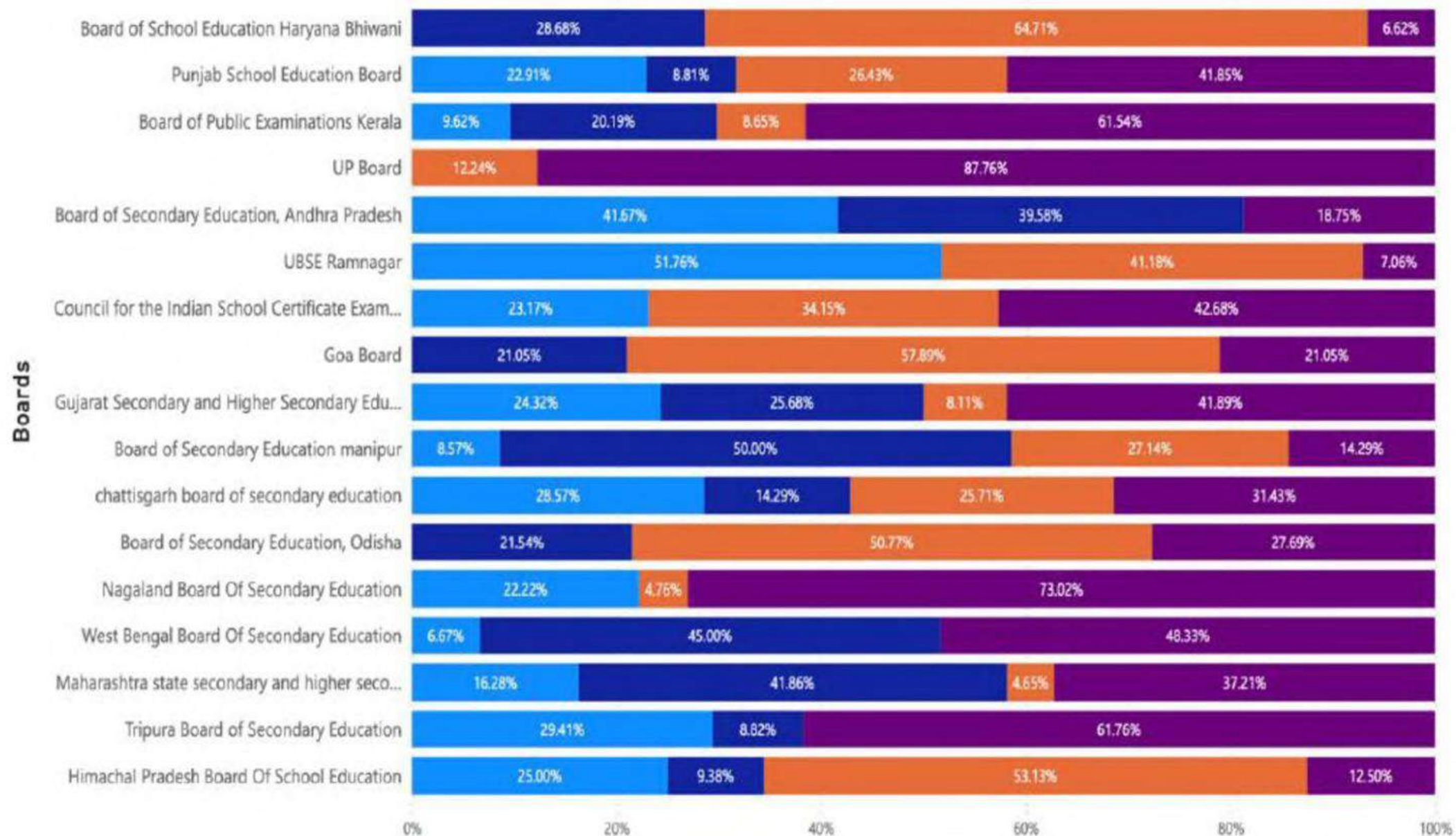
Results of the QPT Analysis

Ref: Establishing Equivalence Across Education Boards Report
(<https://ncert.nic.in/parakh.php>)

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Cognitive Demands of Items Weighted by Marks

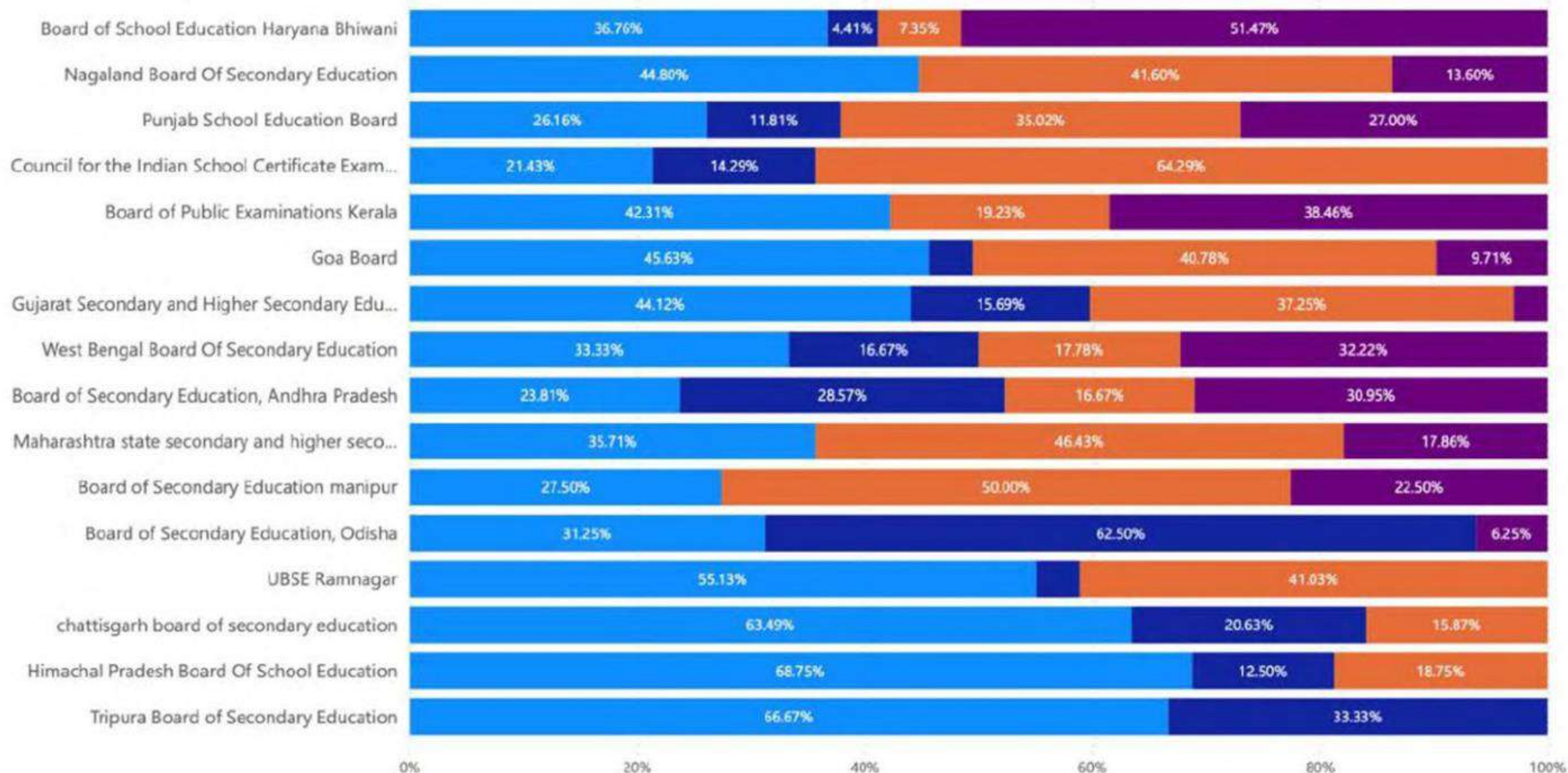
Cognitive demand ● Analyse ● Apply ● Remember/recall ● Understand



Type of Questions Weighted by Marks

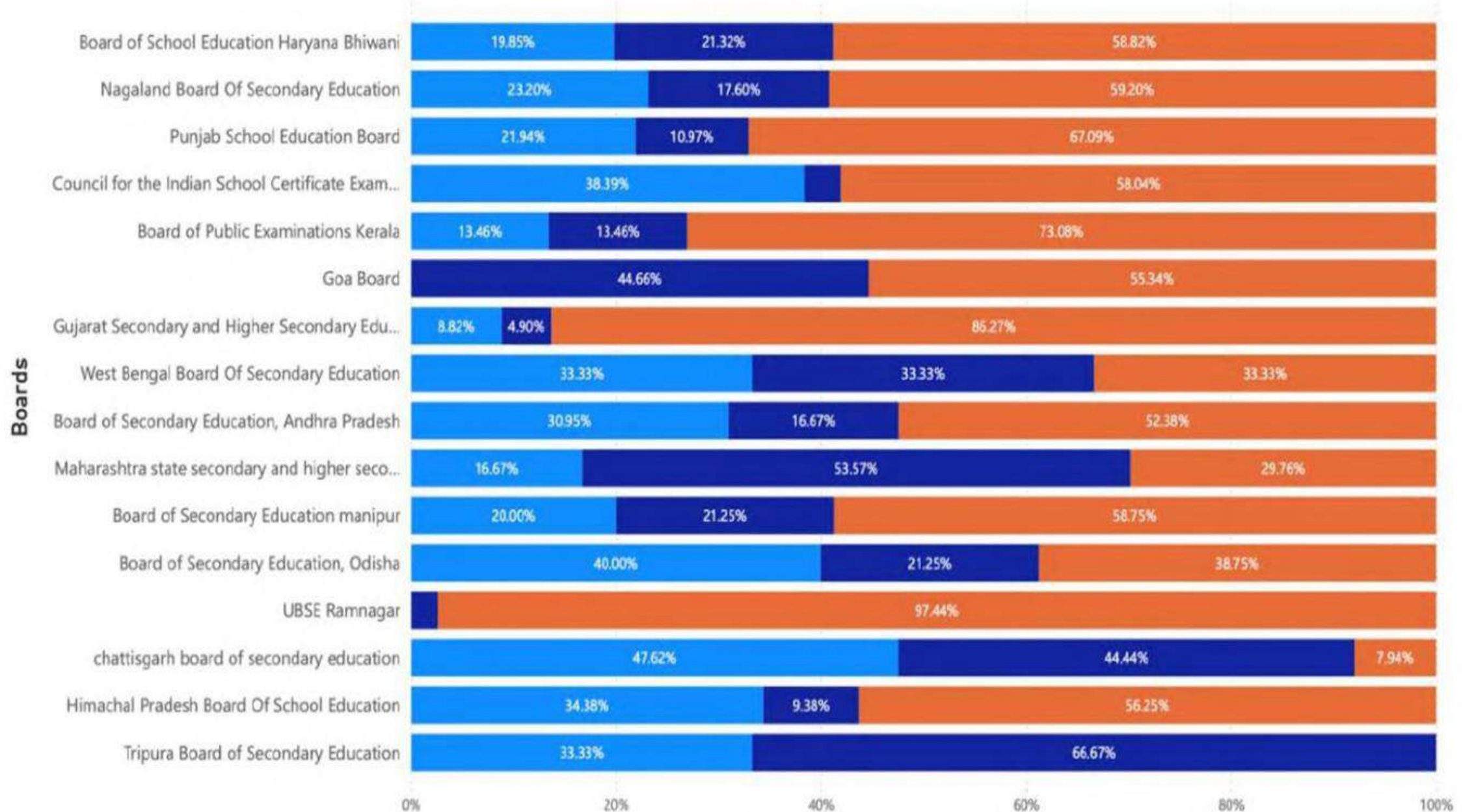
Question type ● Long Answer ● MCQ ● Short Answer ● Very Short

Boards



Difficulty of Questions Weighted by Marks

Difficulty level (E/M/H) ● Easy ● Hard ● Medium



Insights

There is a stark disparity in the following areas of the question papers used by different school boards in the country:

- **Inconsistent distribution of weightage in different cognitive demands** of the content.
- **Uneven distribution of marks** according to the **nature of the items**.
- **Lack of a logical scheme** in the distribution **of marks** across various **difficulty levels**.

What NEP 2020 says

- Establish a **National Assessment Centre, PARAKH**, tasked with setting common standards for assessment outcomes across all states and boards.
- Enable learners to shift from one board to the other without facing disadvantages due to differences in assessment systems.
- Restructure assessment methods to prioritize assessing conceptual understanding, critical thinking, and analytical abilities, and testing core competencies rather than rote memorization.
- A holistic, 360-degree, multi-dimensional report is recommended, reflecting learners' cognitive, affective, and psychomotor progress.

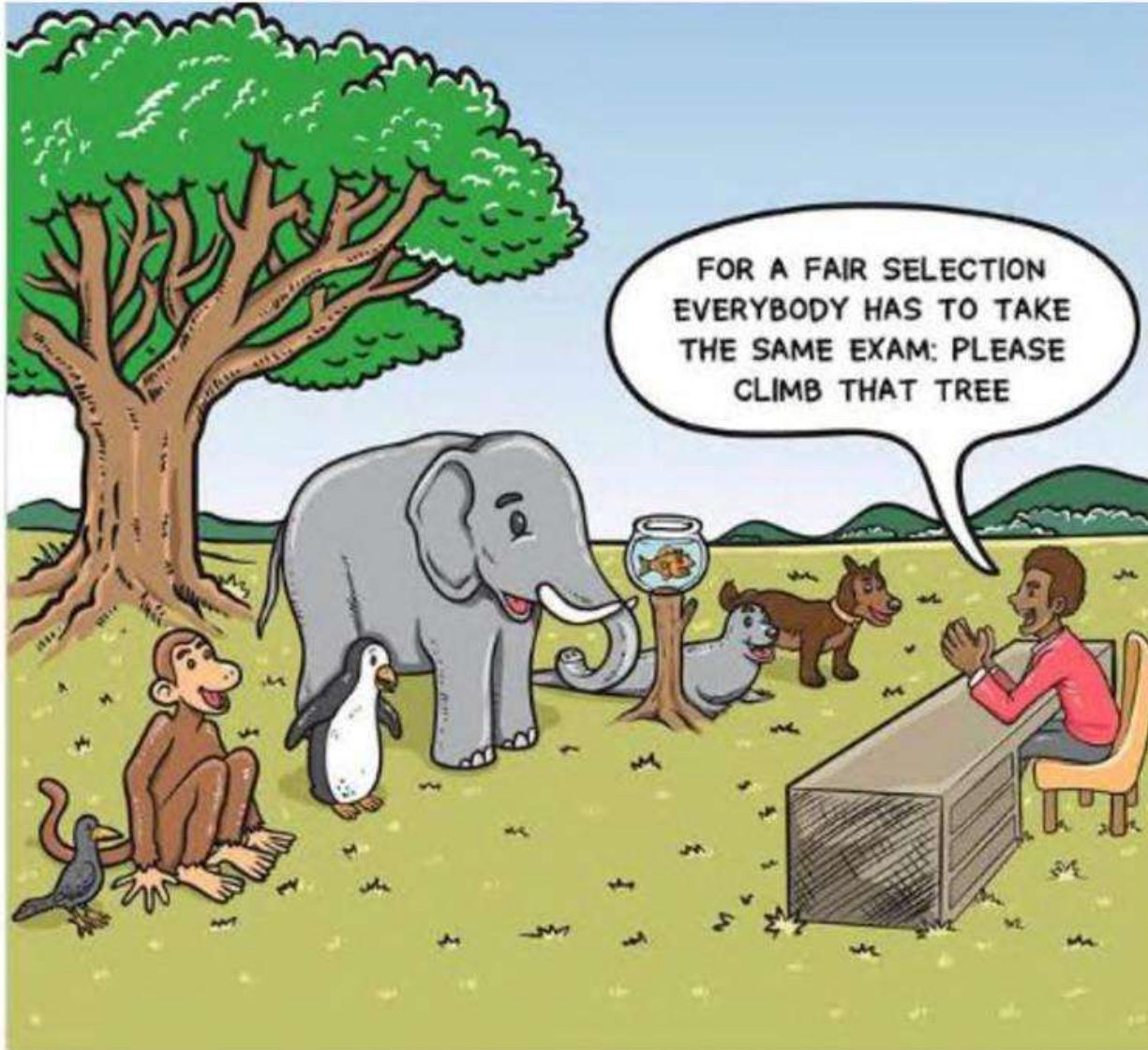
Definition of Evaluation/Assessment

**"Evaluation is a systematic process of determining the extent to which educational objectives are achieved by the pupils."
Tyler(1950)**

"Evaluation is providing information for decision making." (Cronback, 1963; Sufflebeam, 1969; and Alkin, 1969)

Assessment is the "Process of estimating the status of pupil's development in different aspects of learning. It can be both qualitative or quantitative. In British literature assessment is used as synonymous to American term evaluation Nevo:1995"

Concept of Educational Assessment



"Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid."

- Albert Einstein

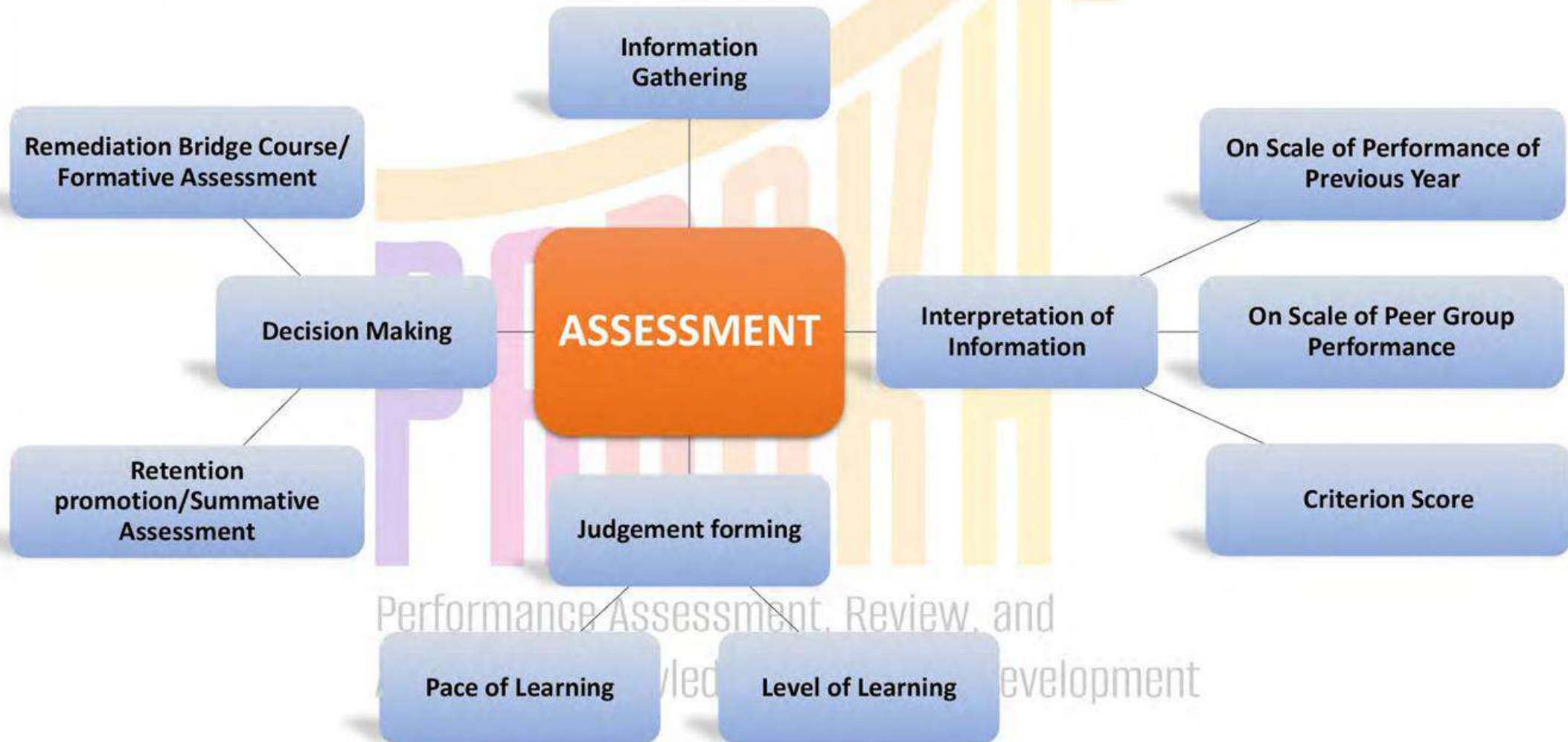
Assessment means

- Assessment is often confused with testing/measurement.
- Assessment is a comprehensive term which includes testing, measurement, also a qualitative description of pupil behaviour along with value judgment.

Assessment = Measurement + Value Judgement

- Thus, assessment goes beyond a simple quantitative Score.

Components of Assessment



Types of Assessment

- **Placement Assessment/Entry Behavior** : Placement evaluation identifies a child's prior knowledge to determine readiness for new learning, helping teachers address strengths and weaknesses to ensure effective instruction and competency development.
- **Formative Assessment** : Formative evaluation is a continuous process that provides feedback on student progress and teaching effectiveness, helping identify learning gaps for improvement through tests, assignments, and classroom activities.

Types of Assessment

- **Diagnostic Assessment :** Diagnostic evaluation identifies specific learning difficulties in areas like language and mathematics, enabling targeted remedial measures to improve learning outcomes.
- **Summative Assessment :** Summative evaluation assesses achievement at the end of a course for grading and certification but lacks diagnosis and remediation.

What type of Assessment is your Boards Examination?

Board examinations are typically a form of Summative Assessment. They are conducted at the end of an academic term or year to evaluate a student's cumulative learning and performance. Summative assessments measure the knowledge and skills acquired over an extended period and are often used to determine qualifications for promotion, certification, or graduation.

Techniques and Tools of Assessment

- Different techniques and tools are used to evaluate different attributes of learners.

Techniques

- Written test
- Oral test
- Practical exercises
- Observation
- Interviews

Tools

- Question paper
- Quiz
- Practical test
- Anecdotal records
- Rating scales
- Checklist
- Assignments
- Project

Principles of Assessment



- Determining and clarifying what is to be assessed
- Selecting assessment techniques in terms of the purpose to be served
- Combining a variety of techniques for comprehensive assessment
- Knowing the strengths and limitations of various tools
- Assessment is a means to an end, not an end itself.

Characteristics of a Good Assessment Scheme

- It should be a continuous and comprehensive process.
- It should be a cooperative process.
- It should be a decision-making process.
- It should be an objective-based process.
- It should be reliable.
- It should be valid.
- It should be practicable.

Why Should Children Be Assessed?

- Since we are all concerned about children's learning, assessment needs to be undertaken for several reasons :
 - Support and improve your child's learning and development.
 - Observe what changes and progress take place over time.
 - Identify an individual's special needs and requirements.
 - Plan teaching-learning practices in a more suitable way.
 - Enhance the child's self-understanding and personal development.
 - Achieve curriculum aims/syllabi objectives.
 - Provide evidence of children's progress to communicate to parents and others.

Assessment as Envisioned in NCF-SE

- **Assessment of learning** refers to the measurement of learners' achievements.
- **Assessment for learning** involves gathering evidence of learners' progress to enhance the teaching-learning process.
- **Assessment as learning** encourages learners to take an active role in their learning.
- The study of **Equivalence of Board** provides insights into the need for a balanced and uniform design of assessment schemes.

Assessment at Different Stages: NCF-2023



FOUNDATIONAL STAGE:

- It should be a natural extension of learning- No burden.
- Explicit tests and examinations are completely inappropriate.
- Assessment should enable recording and documentation.
- Two important methods for the foundational stage- observation and analysing artefacts.
- Tools- checklists and rating scale.

PREPARATORY STAGE:

- A robust system of formative assessment.
- Should act as an instructional tool.
- Written tests to be introduced.
- The idea of competency should be taught to students.
- Portfolio, peer and self-assessment
- Comprehensive summative assessment of students
- Readiness to enter the middle stages
- Important tools used – observation, Anecdotal record, checklist, rating scale, assignment, unit test

MIDDLE STAGE:

- Competency-based, covering all dimensions of learning
- To test conceptual understanding, classroom assessment techniques, projects, debates, presentations, experiments, investigations, journals and portfolios should be used.

SECONDARY STAGE:

- Regular summative assessment
- Self-assessment will play a key role
- Comprehensive classroom assessment
- Summative assessment to contain case-based questions, simulations and essay-type questions
- Students to be prepared for Board examinations and other selection tests

Development of a Balanced Question Paper

Performance Assessment, Review, and
Analysis of Knowledge for Holistic Development

Foundations of Paper Setting

The Content, structure, and function of the question paper are conditioned by the purpose, scope and focus of testing.

1. Philosophical basis:

- Understand the primary purpose of the exam before designing the paper.
- Align content with the intended goal (e.g., selection, achievement, promotion, or diagnostic testing).
- Purpose-driven structure ensures the test accurately measures the desired outcomes.

2. Sociological basis:

- Paper setting is a social construct as it aims to categorise students as deviants, underachievers, and high achievers.
- How to minimize gaps in the standards of performance.

Foundations of Paper Setting

3. Psychological basis:

- Provides healthy competition
- Diagnose learning difficulties
- Regulating appropriate difficulty level

4. Scientific basis:

- Validity
- Reliability
- Assessment objectives

5. Pedagogical basis:

- Positive impact on teaching-learning practices.

A Balanced Question Paper should

- Discourage rote learning
- Be objective based
- Have an adequate sampling of course content
- Contain all forms of questions
- Contain Questions testing all abilities
- Have no overall choice
- Contain more no. of question
- Provide adequate response time

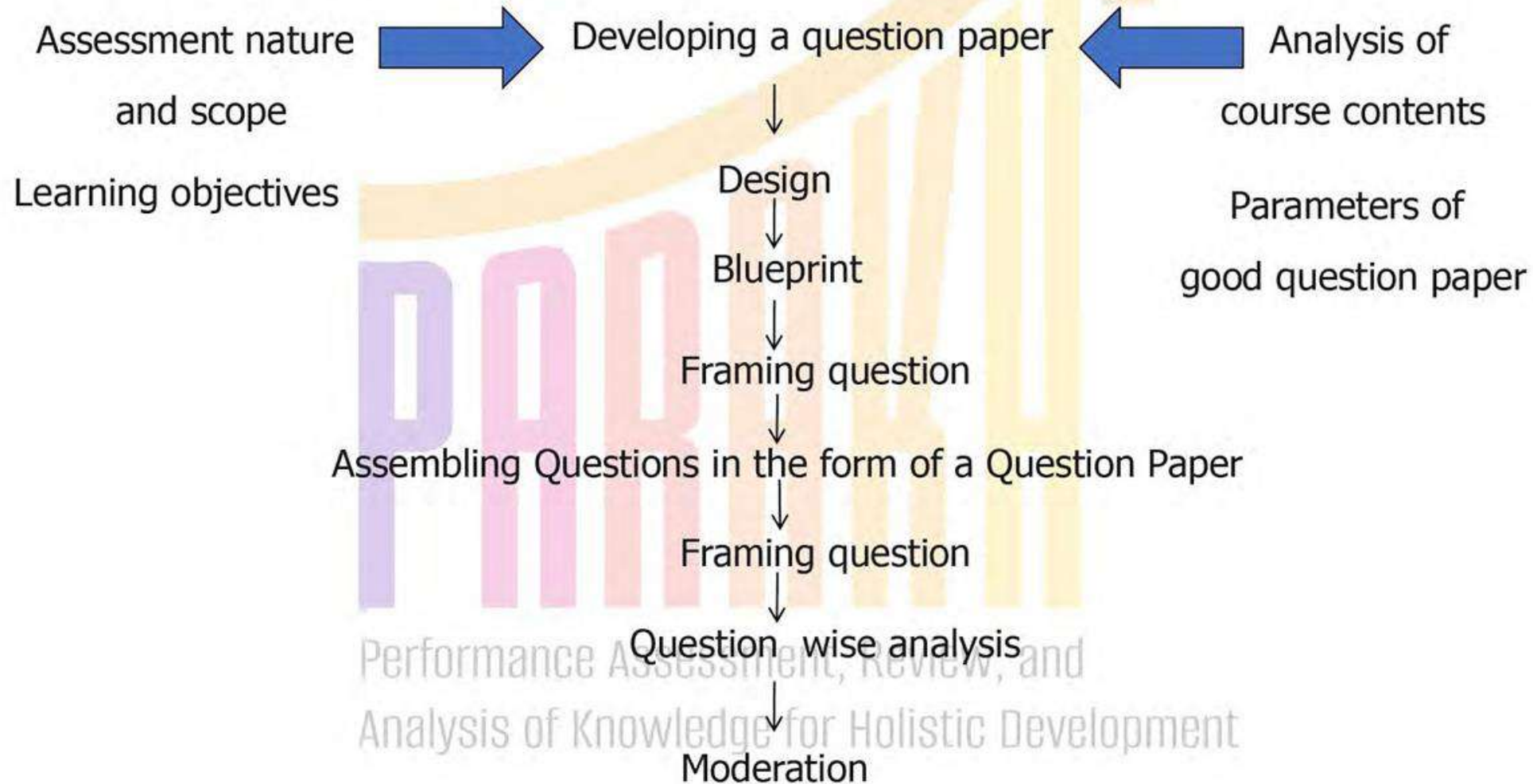
A Paper Setter Needs to be Oriented in

- Instructional objectives and their specifications.
- Rules for framing objectives-based questions of different forms.
- Theoretical foundations of the development of design and blueprint of question papers.
- Preparation of scoring keys and marking schemes.
- Overall analysis of the question Paper design and formation of questions (language, structure, content, etc.)

Steps to Develop a Balanced Question Paper

1. Preparation of a Design.
2. Preparation of a blueprint.
3. Writing of Questions.
4. Assembling Questions in the form of a Question Paper.
5. Preparing Scoring Key/Marking Scheme.
6. Carrying out Question-wise Analysis.
7. Moderation of a Question Paper

Question Paper Setting-An Overview



Design

The word 'Design' connotes all those decisions which are taken for the planning of a test paper. Such as;

Weightage to the

- Instructional objectives: k/U/A/Analysis/Eval/Create
- Form of questions: VSA/SA/E/O
- Content units, sub-units-weightage
- Difficulty level of question E/A/D (Easy/average /difficult)
- Scheme of
 - a. Options
 - b. Sections

**Format of Design
Question Paper/Test**



Subject:
Unit/Paper:
Class:
Time:
Marks:

Weightage to Objective

Objective	Knowledge	Understand	Application	Analyse	Evaluation	Creation	Total
Percentage of Marks							
Marks							

Weightage to form of question:

Forms of Questions	E/LA	SA	VSA	O (MCQ)	Total
No. Of Questions					
Marks allotted					
Estimated time					

Weightage to Major Content Areas:

S. No.	Unit/Sub-Units	Marks
1.		
2.		
3.		
4.		
5.		
6.		
Total		

Schemes of Sections	
Pattern of Options	

Estimated difficulty level:	Difficult	%marks
	Average	%marks
	Easy	%marks

Index of Abbreviations:

(E/LA: Essay/Long Answer; SA: Short Answer; VSA: Very Short Answer; O: Objective)

Blueprint

1. Transfer of decisions of design
2. Placement of
 - a. Cognitive domains
 - b. Nature of questions
3. Checking the weightage allotted to the questions
 - a. Objectives
 - b. Nature of Questions
 - c. Estimated difficulty levels of Questions
4. Allotment of the serial number to questions

FORMAT OF BLUEPRINT

Subject : _____

Class : _____

Unit/Paper: : _____

Max Marks : _____

Time : _____



S. No.	Objective →	Knowledge				Understanding				Application				Analysis				Evaluation				Creation				Total Row Wise
	Form of Questions																									
	Content Unit/ Sub Unit	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	E/LA	SA	VSA	O	
		d	j	j	j	d	i	i	i	d	h	g	f											e	e	c
		d	j	j	j	d	i	i		d	h	g	f											e	e	c
		d	j	j	j	d	i	i		d	h	g	f											e	e	c
		d	j	j	j	d	i	i		d	h	g	f											e	e	c
		d	j	j	j	d	i	i		d	h	g	f											e	e	c
		d	j	j	j	d	i	i		d	h	g	f											e	e	c
		d	j	j	j	d	i	i		d	h	g	f											e	e	c
	Sub Total																									Marks (QS)
	Total Column → Wise	b (Marks Total)				b (Marks Total)				b (Marks Total)				b (Marks Total)				b (Marks Total)				b (Marks Total)				a

Notes: Figures within brackets to indicate the number of questions and figures outside the brackets to indicate marks.

Denotes that marks have been combined to form one question.

Summary: Essay (E) No. _____ Marks _____ Pattern of Options _____
Short Answer (SA) No. _____ Marks _____
Very Short Answer (VSA) No. _____ Marks _____ Scheme of Sections _____
Objective (O) No. _____ Marks _____

Steps: a, b, c, d, e, f, g, h, i, j

Step 3: Writing of Questions

- Will discuss it later in detail (separate presentation is attached.)

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Step 4: Preparation of Question Paper

- Write general instructions clearly so that the students get a clear idea about the magnitude of the task
- Assembling questions to a suitable criteria:
 - Form of questions,
 - Instructional objectives
 - Content units,
 - Difficulty level
 - According to the convenience of administration in the examinations

Step 5: Preparation of Marking Scheme

- Limit inter-examiner variability
- For subjective Questions: expected outline of answers should
 - complete and cover all possible major areas/points as desired by the paper-setter
 - indicate each expected point or its parts under the outlined major areas
 - Expectation of correct/partially correct answers
 - break up of marks for each expected point
 - Some marks may also be kept aside for such overall qualities of the answer, apart from the content

Step 6: Question Paper Analysis

- The question paper is set in conformity with the blueprint and design
- The degree of agreement between the prepared question paper and the design the paper-setter has to analyse once again each question concerning the objective it tests. the specific skills it measures, the unit to which it belongs, the type of the question, the length of the expected answer, the time taken by the average student to answer and its estimated difficulty level

Proforma for Analysing Question Papers

Part I: General Information



1. Name of the Board:	
2. Name of Examination:	
3. Year of Examination:	
4. Class:	
5. Subject:	
6. Question Paper Number:	
7. Maximum Marks:	
8. Time Allotted:	
9. Sections, if any:	



Part -II (A): General Item General Analysis of Question of a Question Paper.

S.No .	Objective	Specification	Content	Unit/Sub -Unit No.	Form of Question	Marks Allotted	Estimated time (min)	Estimated Difficulty Level
1								
2....								
total								

Step 7: Moderation

- For School-Based Examinations like term-end exams or summative exams, moderation could be done internally by subject teachers and senior teachers.
- However, Board exams have high stakes, requiring strict confidentiality and careful selection of external moderators. These moderators must:
 1. Be different from the paper setter.
 2. Have significant expertise in the subject.
 3. Be familiar with the syllabus and instructional goals.
 4. Be trained in paper-setting processes.
 5. Possess proven skills in item review.

Evaluation of Question Paper (Post Administration)

The quality of the measuring instrument (Question paper) depends upon 3 basic criteria

- Validity (Accuracy)
- Reliability (Dependability)
- Practicability (Usability)
- Objectivity (Justice)

1. Validity-

It refers to the extent to which a test measures what it intends to measure.

Types of validity

1. **Content validity:** adequate sampling of content;
2. **Curricular validity:** the degree to which it measures the instructional objectives;
3. **Empirical validity:** measures the relation between the test scores and the criteria scores;

Out of the above, content and curricular validity that matter most in an academic examination.

To ensure the reasonable validity of a question paper:

1. Assessment objectives are pinpointed.
2. Proportional weightage is given to each assessment objective.
3. The examination syllabus is divided into content units of testing with weights.
4. Questions are based on each content unit.
5. Internal / Alternate / Equivalent options and in long answer type questions only.

2. Reliability

It means how accurately and consistently it measures achievement from time to time.

A test will be reliable if:

1. Items used have proportional distribution in content.
2. Items have a good range of difficulty levels.
3. Items are of multiple-choice type
4. Items include higher-level abilities and not based on memory only;
5. The test is long i.e. more number questions are included;
6. Range of ability of the population sample is wide i.e. sample is heterogeneous;

3. Practicability

The practicability of the test may be taken care of by:

1. Making the format of the question paper functional.
2. Making it time effective in terms of several questions included.
3. Use only those varieties of questions that are familiar to examinees.
4. Minimizing the choice of malpractices through in-built mechanisms.
5. Including adequate instructions, mechanism of distribution and collection of papers, time frame etc for smooth conduct of examination.

4. Objectivity (Justice)

The examinee should get the marks he deserves.

Framing Questions

Different Forms of Questions

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Quality of a Good Question (1/5)

A good question should conform to the following characteristics

I. Test the desired objectives effectively.

- The question should test the ability that it is expected to test.
- A question may sometimes test more than one objective (competency).
- Testing Single objective should be encouraged.

II. Content Coverage

- The question should attempt to test the topic or sub-topic effectively, it is meant to test.

Quality of a Good Question (2/5)

III. Form of question

The choice of the form of the question depends considerably on

1. The ability to be tested.
2. Content desired to be tested.
3. Time provided for testing.

For example, essay-type questions are more suited for testing abilities like organization of thoughts, interpretation of facts and evidence and also for offering critical comments.

IV. Language/Wording of question:

- The question should be framed using clear, precise and unambiguous language (Wording) to bring objectivity to the interpretation of the requirements of a question.
- It should be within the effortless comprehension of students.
- By and large all students should make the same meaning out of it.
- Appropriate directional phrases should be used.

Quality of a Good Question (3/5)

V. Structuring the Situation

The selection of the most appropriate testing situation is an important step in framing the question.

These should be selected in keeping with the **general awareness and ability** of the students

VI. Difficulty level:

The difficulty level of the question usually depends upon:

- The degree of complexity of the mental processes involved.
- The area or aspect of the content desired to be tested.
- Time available for answering it.

The difficulty level of the question should be commensurate with the achievement and ability levels of pupils for whom the question is meant.

The actual difficulty index, of course, is obtained only after the question is administered.

Quality of a Good Question (4/5)

VII. Discriminating Value:

- The question should discriminate between the achievement level of learners
- Very easy or difficult questions cannot gauge such discrimination.

VIII. Delimitation of the scope of the expected answer:

Questions should be specific and precise in length so that the scope and the length of the expected answers are clearly delimited and defined.

IX. Key/Marking Scheme:

The key for the objective type questions.

Marking Scheme for essay-type questions.

Weightage to each (value) point of the expected answer in terms of marks be mentioned.

For very short answer-type questions, the actual word phrase or sentence expected in an answer should be indicated in the marking scheme.

Quality of a Good Question (5/5)

X. Translatability:

- The wording of the question, therefore, should be such that it lends itself to translation without affecting the item or the difficulty level.

PARAKH

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Type of Questions

Supply Type/Constructed Response Type

- Essay Type/Long Answer (LA)
- Short Answer (SA)
- Very Short Answer (VSA)
- Fill in the Blanks/One word, etc.

Selection Type

- Alternative Response Type
- Matching Type
- Multiple Choice Type

Advantages of Essay Type Questions

- Many abilities may not be tested through any other form of questions but can be tested by only Essay type questions
- To defend one's viewpoint through facts, data, and suitable arguments.
- No Chance of guessing, required to produce their answer.
- It measures the higher mental ability to think, integrate, interpret, organise, and express knowledge effectively
- An Indigenous/original approach to solving a given problem

Limitations of Essay-Type Questions

- Limited sampling of course content and objectives that affects the reliability and hence the validity of essay tests.
- Subjectivity in scoring
- “Halo effect” along with hand-writing, and spelling-mistake affects scoring.
- Judging the answer and scoring is a time-consuming & tiring process
- Lengthy illustrations/repetitious statements to bluff the examiner

Constructing Essay-type Question

- Phrase the item to achieve maximum clarity, understanding, and scope of the answer is clear.
- Alignment with instructional objectives to achieve maximum content validity.
- Inform students about the scheme of value points.
- Overall options should be avoided, instead, if necessary, use internal choices
- Keywords to be used: "Discuss", "Explain", "Evaluate", etc.
- These may have two formats- 1-Question form 2 - Statement form

Examples:

- What is communalism? Is it a threat to Indian democracy? Give three arguments to support your views. (1+1+3)
- Define Democracy. Give two merits and two demerits of democracy.(1+2+2)

Constructing Essay-type Question

Enhance scoring reliability:

- Prepare model answers that may provide a standard to compare all answers for evaluation
- Specify the factors to consider in evaluating response, e.g. credit for organising information, expression, data facts, etc.
- Scoring a single question in all the papers at a time
 - Increases scoring efficiency due to focus on one question at a time and facilitates more accurate evaluation
- Scoring should be free from the Halo effect, which leads to unbiased evaluation
- Unless any of the objectives is to measure the quality of handwriting, should not allowed to influence the score.

Short Answer Questions

Short answer questions bridge the gap between objective and essay questions. They offer the advantages of both without the disadvantages if framed properly, providing a balanced approach to assessment.

Short Answer Questions

1 **Word Count**

Answers typically range from 50-60 words.

2 **Line Count**

Answers may consist of 2 to 6 lines.

3 **Credit Points**

Questions may be worth 2 to 4 value points.

4 **Time Limit**

Students should be able to answer in 3 to 5 minutes.

Advantages of Short Answer Questions

1 **Versatility**

Suitable for both external and internal examinations.

2 **Comprehensive Assessment**

Can test a wide range of learning objectives.

3 **Skill Development**

Encourages students to organize and select relevant information.

4 **Objectivity and Reliability**

Can be scored more objectively than essay questions.
Helps in covering more syllabi, and can put more no. of questions in view of the essay-type question.

Constructing Short Answer Questions

Identify the Ability

Determine the specific skill to be tested, such as understanding, comparison, or explanation.

Clarity and Precision

Frame questions with definite answers, using precise language and directional words.

1

2

3

4

Focus and Specificity

Avoid broad questions; ensure the question has a clear and specific task.

Breakdown Complex Topics

Break down complex topics into multiple short answer questions.

Types of Short Answer Questions

Question Form

Why is it that Iceland and Tasmania celebrate their Christmas in different seasons?

Statement Form

Give two differences which occur between rocks and minerals.

Give Reason

Why do metal surfaces feel colder than wooden surfaces on a cold winter day, even if both are at the same temperature?

Cause-effect

Explain how deforestation can lead to an increase in carbon dioxide levels in the atmosphere.

Analyses

Person 'A' purchases an electric iron which has an ISI mark and person 'B' purchases an electric iron without an ISI mark. In your opinion, who is correct and why.

Very Short Answer Questions

- 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 by this item.
- 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 to answer a question.
- The range of marks is half to one-mark and it may take one to two minutes to answer.
- These can be answered in one word or one sentence.

Advantages of Very Short Answer Questions

Factual Information

Primarily test factual knowledge, the foundation of learning.

Ease of Construction

Relatively simple to write and score.

Reduced Guessing

Less susceptible to guessing than true/false or multiple-choice questions.

Vocabulary Testing

Popular for testing vocabulary in subjects like language, geography, and science.

Constructing Very Short Answer Questions

1

Single and Unique Answer

Word the question carefully to elicit a single, specific answer.

2

Intended Answer

Consider the intended answer before writing the question.

3

Placement of Blank

If using an incomplete sentence, place the blank in the middle.

4

Direct Questions

Use direct questions unless an incomplete sentence is more concise.

5

Avoid Clues

Prevent unintended clues to the correct answer.

Types of Very Short Answer Questions

1 **Completion Type**

I was so worried...

3 **Location Type**

Show on the map - Dharmshala, H.P.

5 **Usage Type**

Use the following words and phrases in your own sentences: Break, break-up, look, look after.

7 **Context Dependent**

Pictorial and Interpretive type

7-ii **Interpretive Type**

Directions: Read the bus timetable given here and answer the questions that follow.

2 **Analogy Type**

Lime stone: Marble, Coal...

4 **Transformation Type**

This is used only in language testing. Reported speech, voices, synthesis, transformation of sentences, etc. can be tested through these types of questions.

6 **Question Form**

What is a mole?

7-i **Pictorial Type**

What are the occupations of the following:
Persons **Occupation**

Selection-type Questions

- **Alternative Response Type**

- True/False
- Yes/No

- **Multiple-Choice Type**

- Question Form
- Incomplete Statement

- **Matching Type**

- Single
- Double
- Matrix
- Fill in the blanks

Selection Type Questions

Objective Type

Objective type questions have only one correct answer which the student has to choose out of the given choices.

Ease of Scoring

- Scoring is done mechanically, making them popular for large-scale assessments.
- No variability in scoring

Time and Effort

While easy to score, objective type questions require considerable time and effort to prepare.

Criticism

- Objective type questions are sometimes criticized for not requiring higher mental abilities, but they can be framed for any level of difficulty.
- Answer can be guessed.

Advantages of True/False Questions

Easy to Construct

True/False questions are relatively easy to construct and require less time and effort compared to other question types.

Easy to Score

Scoring True/False questions is straightforward and can be done quickly, making them efficient for large-scale assessments.

Suitable for Basic Concepts

True/False questions are effective for testing basic knowledge and understanding of fundamental concepts.

Disadvantages of True/False Questions

1 **Guessing**

The main disadvantage of True/False items is that there is a 50 per cent chance of guessing, therefore even poor students may score 50 per cent just by chance.

2 **Limited Scope**

True/False questions are often limited in their ability to assess complex understanding or higher-order thinking skills.

3 **Ambiguity**

Sometimes, a statement can be interpreted in multiple ways, leading to confusion for students and making it difficult to determine the correct answer.

Matching Type Questions

Single Matching

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

Multiple Matching

In multiple matching, students need to match multiple responses to a single stimulus or vice versa. This type of question requires a deeper understanding of the relationships between concepts.

Advantages and Disadvantages of Matching-Type Questions

- **Advantages**

- Content area coverage
- Reduces reading and response time
- Provide objective measurement of learning
- Scoring is easy and can be done efficiently and accurately. Increased reliability of a tool

- **Disadvantages**

- Questions are difficult to construct due to the selection of a common set of stimuli and response
- Limited scope to measure higher cognitive domain

Multiple Choice Questions

Versatile

Multiple choice questions can be used to test a wide range of learning outcomes, from basic knowledge to higher-order thinking skills.

Objective Scoring

Scoring multiple choice questions is objective and reliable, reducing the risk of subjective bias.

Time Efficient

Multiple choice questions are relatively quick to answer, allowing for a wider range of content to be covered in a limited time.

Diagnostic Value

Multiple choice questions can provide valuable insights into student understanding and identify areas where further instruction is needed.

Advantages of Multiple-Choice Questions

- It can measure a variety of learning outcomes effectively.
- It can be adapted to wide range of content areas.
- It may be used to measure learning outcomes in several content areas where solutions to problems are not clearly true or false but vary in degree of appropriateness.
- The reliability per item is greater than true-false item due to increased number of alternatives because the chance: for guessing the correct answer is reduced proportionally.
- By placing correct answer at different positions in different questions the students are not permitted to adopt any response pattern blindly.
- The use of a number of plausible alternatives make the results amenable for the purposes of diagnosis.

Limitations of Multiple-Choice Questions

1

Limited Depth

Multiple-choice questions may not be suitable for assessing complex problem-solving skills or the ability to express ideas in a comprehensive manner.

2

Difficulty in Creating Distractors

Developing plausible and effective distractors can be challenging, requiring careful consideration of common misconceptions and alternative interpretations.

3

Guessing

While the chance of guessing correctly is reduced compared to True/False questions, there is still a possibility of students guessing the right answer.

Construction of MCQs

- The multiple-choice type of questions are the most commonly used objective-type questions.
- A multiple-choice question has the following parts :
 - Stimulus
 - Stem
 - Alternatives/distracters
 - Key

Alternatives

The alternatives/distracters have to satisfy some basic conditions as are below :

- Alternatives have to be homogenous – if it is a question of the properties of gases, all of them should be properties. If it is a question related to countries, the distractor should have the names of the countries only
- The distractor should invariably be of the same physical length.
- None of the distractors should provide any clue about the correct alternative.
- The alternative should be in the same form (in the same tense, same number same gender etc.)
- The alternative should be plausible (that could be mistaken as possible answers)

Alternatives

The alternatives/distracters have to satisfy some basic conditions as are below :

- The alternative should appropriately and with grammatical accuracy form correct sentences with a completion type of a stem.
- In the sequential placement of the alternatives, the alternative to be selected should change places from questions to questions. The alternative should present one and only one correct answer.
- The alternatives should present just one and only one correct answer which is called the **"Key"**

Key

- MCQs require a student to select one of the alternatives as a correct response.
- This correct response is called the Key.
- The testing situation in MCQs may require the students to select :
 - the only correct alternative.
 - the only wrong alternative.
 - the most appropriate or best alternative.

Sr. No.	FORM	ESSAY TYPE	SHORT ANSWER TYPE	VERY SHORT ANSWER TYPE	OBJECTIVE TYPE
	ASPECTS				
1.	Objectives tested	Can be used for testing all objectives. Are more appropriate for testing certain higher objectives	Can be used equally effectively for testing all objectives	Can test all objectives which are testable through objective type questions.	Cannot be used for testing expression, the ability to organise and skills etc.
2.	Content coverage	Result in a very poor sampling of content	Helps in increasing the sample of content	Helps improve the sample of the content.	The use of a large number of items results in a broader coverage which makes representative sampling possible.
3.	Subjectivity of scoring	There is a lot of subjectivity in scoring	Subjective scoring is controlled.	Scoring can be almost as objective as in objective type questions.	No subjectivity of scoring.
4.	Ease of scoring	Very difficult to score	Comparatively easy to score	Very easy to score	Extremely easy to score.
5.	Ease of preparation	Very easy to prepare	Moderately easy to prepare	Quite easy to prepare	Difficult to prepare.
6.	Bluffing in	Quite possible	Limited	Not possible	Not at all
7.	Halo effect	predominant	Controlled	Completely Controlled	Impossible
8.	Guessing	Not possible	Very little	Very little	Quite possible

Cognitive Level	Description	A Sample of Action Verbs in each Cognitive Domain
Remembering	Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.	recognize, choose, identify, select, match, label, name, read, quote, recite, state, reproduce, outline, recall, repeat, locate, define
Understanding	Construct meaning from instructional messages, including oral, written, and graphic communication by organizing of facts and ideas comparing, translating, interpreting, giving descriptions, and stating main ideas.	classify, explain, select, tell, illustrate, express, give example, show, categorize, paraphrase, defend, interpret, distinguish, interrelate, extend, indicate, restate, estimate, convert, represent, translate, generalize
Applying	Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	organize, grade, calculate, divide, subtract, modify, use, compute, add, multiply, prepare, solve, change, dramatize, produce, design, complete, sketch, operate
Analyzing	Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations.	identify, detect, discriminate, interrelate, breakdown, develop, infer, relate, distinguish, subdivide
Evaluating	Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.	assess, grade, judge, contrast, measure, defend, critique, test, examine, rank, rate, compare, contrast, determine, justify, support, criticize, conclude
Creating	Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions.	combine, compose, develop, rewrite, prescribe, propose, reconstruct, hypothesize, formulate, generate, produce, transform, devise, design, integrate. drive

SUGGESTED FRAMEWORK FOR EQUIVALENCE FOR THE SECONDARY STAGE OF SCHOOL EDUCATION

SECONDARY EDUCATION

Phase I		Phase II	
Grade 9	Grade 10	Grade 11	Grade 12
• Earn 32 subject-specific credits • Pass the Census-Based Assessment* (in Grade 8) (2 credits) • Earn at least 2 credits by pursuing online course/s (60 hours) from Online Learning platforms (ex. MOOCs). • Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits) *The census-based assessment in Grade 8 will have 2 credits which will be added in Grade 9.	• Earn 32 subject-specific credits • Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs). • Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)	• Earn 36 subject-specific credits • Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs). • Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)	• Earn 36 subject-specific credits • Earn at least 4 credits by pursuing online course/s (120 hours) from Online Learning platforms (ex. MOOCs). • Complete a minimum of 120 hours of 'involved activities' as per Holistic Progress Card involving Research and/or Community-Based Projects (4 credits)
Total credits – 40	Total credits – 40	Total credits – 44	Total credits – 44

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Performance Assessment, Review, and
Analysis of Knowledge for Holistic Development

Prof. Indrani Bhaduri

CEO and Head, PARAKH



nationalassessmentcenter.parakh@gmail.com



<https://www.linkedin.com/company/parakh-ncert>



https://x.com/parakh_ncert

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