<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Chapters</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Preamble</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Transition of Scheme of Studies into Curriculum, Textbook &amp; Dissemination into Knowledge &amp; Skills</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Learning Distribution units Matrix for Grade IX-XII</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Students Learning Outcomes for Grade IX</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Students Learning Outcomes for Grade X</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Standards &amp; Benchmarks for Grade XI</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Standards &amp; Benchmarks for Grade XII</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Students Learning Outcomes for Grade XI</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Students Learning Outcomes for Grade XII</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Instructional Approaches and Teaching Strategies</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Assessment and Evaluation</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Guidelines for Developing Teaching Learning Resources</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Curriculum Review Committee Members for Education (IX-XII)</td>
<td></td>
</tr>
</tbody>
</table>
PREAMBLE

Curriculum is a mean through which nations transmit their philosophy of life and its spirit to exemplify their value system to its young generations. The development of curriculum requires inputs from the stakeholders to reflect the needs of the society and interests of the learners.

Curriculum, syllabus and standards of education were on the concurrent list under Entry 38 of the Concurrent Legislative List to the Fourth Schedule of the Constitution of Islamic Republic of Pakistan, 1973. After 18th Constitutional Amendment, development of curricula and approval of textbook manuscripts and supplementary reading material relating to textbooks, production of reference and research material in respect of the problems relating to the Schemes of Studies and curricula / textbooks etc. are now the exclusive domain of the Punjab Curriculum and Textbook Board under Punjab Curriculum and Textbook Board Act, 2015 (Act VI of 2015).

To carry out its mandate, the Punjab Curriculum and Textbook Board has prepared a new Scheme of Studies-2017 from Early Childhood Education to Intermediate Level for the province of Punjab in consultation with all the stakeholders involved in the delivery of education. The Scheme of Studies-2017 is prepared keeping in view the arising need of technology in our society, modern trends in education system and to bridge the gap between public / private schools and Deeni Madaris of the Punjab. With the blessing of Allah Almighty, the Punjab Curriculum and Textbook Board and the School Education Department hope that this endeavor will be prolific to generate a new youth, useful for the socio-economic development of the country.

For developing Curriculum of Education for Grade IX – XII, the Education National Curriculum developed by Ministry of Federal Education, Islamabad have been taken into consideration as reference documents.

This Curriculum will hopefully pave the way for bringing about qualitative change in education at this level.

Managing Director
1. INTRODUCTION

Education plays a viable role in shaping the lives of the nation's future citizens. To play this role effectively, the intellectual, personal, social and educational needs of students must be addressed at the same time. Young people need a wide and adaptive set of knowledge, understanding and skills to meet the changing global expectations and to contribute to the creation of a more productive and just society. Curriculum at secondary and higher secondary level therefore, needs to acknowledge the changing trends across the globe for teaching in the 21st century and the challenges that will continue to shape learning in the future. The paradigm shift to the achievements of the highest standards of curriculum is important in setting out what will be taught, what students need to learn and the expected quality of that learning. The curriculum lays the foundation for academic achievement of the students throughout their schooling. For this purpose, the curriculum delineates aspirations for subject-based content, which the students need to study.

In order to achieve this the scheme of studies is divided into subjects to be taught for different grade levels and their content streams per grade. These subjects include languages, natural and social sciences Humanities and technical and vocational areas.

In 1972 when schools were nationalized, the need to have more trained teachers was strongly felt. In order to meet the growing need for teachers. It was decided that in addition to teachers being trained in teacher training institutes, education would be offered as an elective subject in higher secondary schools. This was an innovative way of increasing the number of trained teachers. However, the curriculum was not designed to meet this need as it focused only on introducing students to the theory of education, to knowledge about the education system of Pakistan, and to creating an interest in the teaching profession. Students were not facilitated in acquiring the skills required for effective teaching nor given the opportunity to put theory into practice and learn from it.

Today we are living in the age of technology with knowledge as the main commodity. For overall growth and development of a society, equity in quality education for all is imperative and the government of Pakistan is striving to achieve equity in education. The realization of this goal requires well-trained teachers with the requisite knowledge, skills, and dispositions. This curriculum is aimed at facilitating the education of these students' teachers.
1.1 The Structure and Content of the Curriculum

This curriculum sets out the knowledge, skills and dispositions to be developed in young Pakistanis, who are likely to take up the teaching profession by setting the standards that must be met. Curriculum standards are broad, descriptive and qualitative statements, which represent a set of expectations about what all students should know, be able to do, and the values/attitudes they should hold at the end of the learning cycle. Knowledge standards include the important facts, concepts, issues and information related to the subject area. The skill standards include the ways of thinking, working, communication and reasoning that characterize the subject. The dispositions are the values, attitudes, conscience, that are developed through the subject. Successfully achieving these standards will enable teachers to support the intellectual, social, emotional, moral and physical development of students, respond with flexibility and professional judgment to students differing needs and actively engage them in learning so they can use and generate knowledge in effective and powerful ways (Inter-US States New Teacher Assessment and Support Consortium, 1992).

For each standard, benchmarks are delineated at various developmental levels. The benchmarks are statements that indicate what students will know, be able to do, and the dispositions they should develop at various developmental levels such as primary, middle and secondary school. In the case of the curriculum for Pakistani schools, the benchmarks have been delineated for each stage of education with the exception of the primary years which have been divided into two. However, since the subject of education is offered as an elective to students in classes XI and XII. The benchmarks for classes XI and XII have been provided.

The curriculum also delineates the students learning outcomes (SLOs) for each class. SLOs are the outcomes that must be achieved by students at the end of each class. In this curriculum students learning outcomes are given for classes IX and X. In the Education curriculum there are knowledge, skills and learning outcomes. Teaching and learning process must ensure that all students achieve the student learning outcomes identified for each class. The student learning outcomes begin with a key word which indicates what has to be achieved.

The key words most frequently used in this curriculum and their meanings are provided below:

**Define** - To determine or identify the essential qualities or meaning of a word. A formal statement or equivalent paraphrase being required
Identify - To identify means to distinguish it from something else. It also means to classify something with other items with similar attributes. To identify the things that are tangible (the Nazim of the town one lives in, or intangible justice).

Describe - To describe something is to be able to give a verbal or written account of its basic attributes or characteristics. To describe tangible or intangible objects, processes, institutions, functions, purposes, means and end qualities.

Explain - To identify, describe, clarify or interpret something. One may explain causes of events, the meaning or significance of events or ideas, reasons for various positions or acts.

Differentiate - To perceive or show the difference in or between two or more.

Design - To make a drawing or plan of something that will be made or built

List - To give a sequence of points, generally each of one word, with no elaboration, where a given number of points are specified, this should not be exceeded.

Compare - Required to provide both similarities and differences between things or concepts.

Propose - Put forward a point of view

This section should provide a brief outcome of the components of this manuscript.

(Structure of the curriculum or the tittle should be reshaped by omitting the word structure)
TRANSITION OF SCHEME OF STUDIES INTO CURRICULUM, TEXTBOOKS & DISSEMINATION OF KNOWLEDGE & SKILLS

1. Sustainable development is the pathway to the socio-economic development of a nation. To have technologically vibrant, industrialized and knowledge-based Pakistan maximum efforts must be directed towards imparting high quality education covering emerging trends modern developments and scientific learning.

The Scheme of Studies 2017 has not only laid requisite emphasis on existing subjects like physical and social sciences, it has also focused on Quranic Education with Urdu as well as English translation of the Holy Quran, Technology based education, computer Science & IT, Agriculture education, Business Administration, Fine Arts and Sports Education.

2. The Scheme of Studies has laid down the following Aims and Objectives:
   - To prescribe the subjects, periods, weightage besides medium of instruction at various grades so as to impart high-quality student-centered learning.
   - To introduce emerging trends, modern developments and scientific learning and skills in STEAM subjects (Science, Technology, Engineering, Arts, Mathematics).
   - To provide awareness about national integration, patriotism and ideology with understanding to accept diverse views and beliefs for peaceful co-existence and development of the country.
   - To produce disciplined, motivated and enlightened youth with high moral character, sound ethical values and resilience to face adversities and challenges.
   - To produce creative constructive and critical thinking youth with clear concepts and in-depth understanding of technology driven knowledge economy.
   - To bring students of Ittehad-e-Tanzeemat-e-Madaris Pakistan into main stream of education.

3. Aforementioned Aims and objectives have to be achieved through curriculum, textbooks and dissemination of knowledge & skills to the students.

4. Matrix for Subject of Education for Grade IX – XII is outlined as under: -
# Learning Unit Distribution Matrix

## Themes for Education Curriculum (Class: IX-X)

<table>
<thead>
<tr>
<th>Grade – IX</th>
<th>Grade – X</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Themes &amp; Sub-Themes</strong></td>
<td><strong>Themes &amp; Sub Themes</strong></td>
</tr>
<tr>
<td><strong>Chapter: 1: Concept of education and its scope</strong></td>
<td><strong>Chapter: 7: Guidance and counseling</strong></td>
</tr>
<tr>
<td>- Introduction to education</td>
<td>- Meaning, nature and scope of guidance and counseling</td>
</tr>
<tr>
<td>- Islamic concept of education</td>
<td>- Difference between guidance &amp; counseling</td>
</tr>
<tr>
<td>- Western/modern concept of education</td>
<td>- Approaches to guidance &amp; counseling (humanistic &amp; cognitive view)</td>
</tr>
<tr>
<td>- Modes of Education</td>
<td>- Behavior guidance &amp; counseling</td>
</tr>
<tr>
<td>- Roles of education</td>
<td>- Teacher as guide</td>
</tr>
<tr>
<td>- Functions of education</td>
<td></td>
</tr>
<tr>
<td><strong>Chapter: 2: Foundations of Education</strong></td>
<td><strong>Chapter: 8: organization of school activities</strong></td>
</tr>
<tr>
<td>- Philosophical foundation</td>
<td>- Concept and scope of school activities</td>
</tr>
<tr>
<td>- Psychological foundation</td>
<td>- Overview of curricular and Co-curricular activities</td>
</tr>
<tr>
<td>(learning chapter should be here)</td>
<td>- Elements of co-curricular activities</td>
</tr>
<tr>
<td>- Sociological foundation</td>
<td>- Significance of co-curricular activities on students’ development</td>
</tr>
<tr>
<td>- Economic foundation</td>
<td></td>
</tr>
<tr>
<td>- Islamic foundation</td>
<td></td>
</tr>
<tr>
<td><strong>Chapter: 3: Human growth &amp; development</strong></td>
<td><strong>Chapter: 9: Educational Administration &amp; Supervision</strong></td>
</tr>
<tr>
<td>- Concept of growth &amp; development</td>
<td>- Concept of educational administration, management and supervision</td>
</tr>
<tr>
<td>- Stages of growth</td>
<td>- Scope of educational administration</td>
</tr>
<tr>
<td>- Types of development</td>
<td>- Types of educational administration</td>
</tr>
<tr>
<td>- Role of Education in growth and development (link it with learning)</td>
<td>- Qualities of good administrator</td>
</tr>
<tr>
<td><strong>Chapter: 4: Teaching &amp; Learning</strong></td>
<td><strong>Chapter: 10: Education and society</strong></td>
</tr>
<tr>
<td>- Concept of teaching &amp; learning</td>
<td>- Role of school</td>
</tr>
<tr>
<td>- Overview of teaching methodology</td>
<td>- Role of teacher</td>
</tr>
<tr>
<td>- Overview of learning styles</td>
<td>- Relationship of education and society</td>
</tr>
<tr>
<td>- Factors affecting teaching and learning</td>
<td>- Citizenship behavior education</td>
</tr>
<tr>
<td><strong>Chapter: 5: Curriculum Development</strong></td>
<td><strong>Chapter: 11: Education in Pakistan</strong></td>
</tr>
<tr>
<td>- Concept of curriculum</td>
<td>- Objectives of education in Pakistan</td>
</tr>
<tr>
<td>- Elements of curriculum</td>
<td>- Historical overview of education in Pakistan (overview of conferences and plans)</td>
</tr>
<tr>
<td>- Foundations of curriculum</td>
<td>- Types of education</td>
</tr>
<tr>
<td>- Significance of curriculum</td>
<td>- Levels of education</td>
</tr>
<tr>
<td>- Process of curriculum development in Pakistan</td>
<td>- Early childhood education in Pakistan</td>
</tr>
<tr>
<td>- Co-Curricular activities and personality development</td>
<td>- Problems and challenges of education in Pakistan</td>
</tr>
<tr>
<td>Chapter: 6: Assessment &amp; evaluation in education</td>
<td></td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>• Concept of measurement, assessment and evaluation</td>
<td></td>
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<tr>
<td>• Types of assessment</td>
<td></td>
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<tr>
<td>• General principles of assessment</td>
<td></td>
</tr>
<tr>
<td>• Test and characteristics of a good test</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter: 12: Trends in Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Environmental education</td>
</tr>
<tr>
<td>• Population education</td>
</tr>
<tr>
<td>• Poverty and its alleviation</td>
</tr>
<tr>
<td>• Knowledge economy</td>
</tr>
<tr>
<td>• Human rights education</td>
</tr>
<tr>
<td>• E-learning</td>
</tr>
<tr>
<td>• Educational research and its importance</td>
</tr>
<tr>
<td>• Education for sustainable development</td>
</tr>
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</table>

### Learning Unit Distribution Matrix

#### Themes for Education Curriculum (Class: XI-XII)

<table>
<thead>
<tr>
<th>Grade – XI</th>
<th>Theme &amp; Sub-Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1: Introduction to education</td>
<td></td>
</tr>
<tr>
<td>1. Concept of Education</td>
<td></td>
</tr>
<tr>
<td>2. Importance and Scope of Education</td>
<td></td>
</tr>
<tr>
<td>3. Functions of Education</td>
<td></td>
</tr>
<tr>
<td>• Conservation</td>
<td></td>
</tr>
<tr>
<td>• Transformation</td>
<td></td>
</tr>
<tr>
<td>• Reformation</td>
<td></td>
</tr>
<tr>
<td>4. Aims of Education</td>
<td></td>
</tr>
<tr>
<td>i. Personal Development Aims</td>
<td></td>
</tr>
<tr>
<td>• Spiritual and Moral Aims</td>
<td></td>
</tr>
<tr>
<td>• Intellectual Aims</td>
<td></td>
</tr>
<tr>
<td>• Healthy Life Aims</td>
<td></td>
</tr>
<tr>
<td>ii. Economic / Vocational Aims</td>
<td></td>
</tr>
<tr>
<td>iii. Citizenship Aims</td>
<td></td>
</tr>
<tr>
<td>5. Elements of Education</td>
<td></td>
</tr>
<tr>
<td>6. Foundations of Education</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade – XII</th>
<th>Theme &amp; Sub-Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1:</td>
<td></td>
</tr>
<tr>
<td>Human development</td>
<td></td>
</tr>
<tr>
<td>1. Human Development and Growth</td>
<td></td>
</tr>
<tr>
<td>2. Factors affecting Human Development</td>
<td></td>
</tr>
<tr>
<td>i. Heredity</td>
<td></td>
</tr>
<tr>
<td>ii. Environment</td>
<td></td>
</tr>
<tr>
<td>3. Principles of development</td>
<td></td>
</tr>
<tr>
<td>Individual differences and teaching learning process</td>
<td></td>
</tr>
</tbody>
</table>

### Grade: 2

#### Philosophy and education

1. Concept of Philosophy |
2. Philosophy and Education |
   i. Philosophy and Aims of Education |
   ii. Philosophy and Curriculum |
   iii. Philosophy and Moral Education |
3. Pakistan as Islamic Democratic Society |
   i. Philosophy of an Islamic Democratic Society and Aims of Education |
   ii. Philosophy of an Islamic Democratic Society and Curriculum of Education |

#### Philosophy of an Islamic Democratic Society and Moral Education

<table>
<thead>
<tr>
<th>Chapter 2: Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concept of Learning</td>
</tr>
<tr>
<td>2. Types of Learning</td>
</tr>
<tr>
<td>• Trial and Error,</td>
</tr>
<tr>
<td>• Observational Learning</td>
</tr>
<tr>
<td>• Learning by Insight</td>
</tr>
<tr>
<td>• Learning by Conditioning</td>
</tr>
<tr>
<td>3. Laws</td>
</tr>
<tr>
<td>i. Law of readiness</td>
</tr>
<tr>
<td>ii. Law of exercise</td>
</tr>
<tr>
<td>iii. Law of effect</td>
</tr>
<tr>
<td>iv. Law of association</td>
</tr>
<tr>
<td>4. Factors affecting learning</td>
</tr>
<tr>
<td>i. Readiness</td>
</tr>
<tr>
<td>ii. Motivation</td>
</tr>
<tr>
<td>iii. Interest</td>
</tr>
<tr>
<td>iv. Attention</td>
</tr>
<tr>
<td>v. Attitude</td>
</tr>
<tr>
<td>Chapter: 3: Psychology and education</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td>1. Concept of Psychology and Educational Psychology</td>
</tr>
<tr>
<td>2. Scope and Importance of Educational Psychology</td>
</tr>
<tr>
<td>3. Psychology and Education</td>
</tr>
<tr>
<td>i. Psychology and Aims of Education</td>
</tr>
<tr>
<td>ii. Psychology and Teaching</td>
</tr>
<tr>
<td>• Teaching Methods</td>
</tr>
<tr>
<td>• Classroom Management</td>
</tr>
<tr>
<td>• Motivating Students</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 4: Education and society</th>
<th>Chapter 4: Guidance And Counseling</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concept of a Society</td>
<td>1. Concept of Guidance and Counseling</td>
</tr>
<tr>
<td>2. Relationship between Education and Society</td>
<td>2. Importance of Guidance and Counseling</td>
</tr>
<tr>
<td>4. Social Needs and Education</td>
<td>4. Types of Guidance</td>
</tr>
<tr>
<td>i. Social Needs and Aims of Education</td>
<td>Types of Counseling</td>
</tr>
<tr>
<td>ii. Social Needs and Curriculum</td>
<td></td>
</tr>
<tr>
<td>5. Economic Needs and Education</td>
<td></td>
</tr>
<tr>
<td>i. Economic Needs and Aims of Education</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 5: Education in Pakistan</th>
<th>Chapter 5: Introduction To Educational Management And Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Historical Background</td>
<td>1. Introduction to Educational Administration</td>
</tr>
<tr>
<td>i. Salient Features of Education in Muslim India</td>
<td>2. Importance of educational administration</td>
</tr>
<tr>
<td>ii. Salient Features of Education in British India</td>
<td>3. Elements of Educational Management</td>
</tr>
<tr>
<td>2. Educational Policies</td>
<td>i. Planning</td>
</tr>
<tr>
<td>3. Constitutional Provisions for Education</td>
<td>ii. Organizing</td>
</tr>
<tr>
<td>4. Aims of Education in Pakistan</td>
<td>iii. Commanding</td>
</tr>
<tr>
<td>Structure of Education System in Pakistan</td>
<td>iv. Coordinating</td>
</tr>
<tr>
<td></td>
<td>v. Controlling</td>
</tr>
<tr>
<td></td>
<td>4. Basic principles of educational administration</td>
</tr>
<tr>
<td></td>
<td>i. Principle of democratic leadership</td>
</tr>
<tr>
<td></td>
<td>ii. Principle of cooperation</td>
</tr>
<tr>
<td></td>
<td>iii. Principle of flexibility</td>
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<tr>
<td></td>
<td>iv. Principle of planning</td>
</tr>
</tbody>
</table>
### Chapter 6: Problems of Education in Pakistan

1. Educational Problems
   - i. Low Literacy
   - ii. Low Enrollment and Heavy Dropout
   - iii. Low budgeting for education
   - iv. Education and Politics
   - v. Inclusive Education
   - vi. Quality of Education
     - Quality of Teachers
     - Quality of Physical Infrastructure
     - Quality of Examinations
     - Quality of Textbooks
   - iv. Low Investment in Education

2. Educational Issues
   - i. Female Education
   - ii. Co-Education

### Chapter 7: Multiple Streams of Education

### Chapter 6: Introduction to Educational Research

1. Introduction to Research and Educational research
2. Ways of knowing
3. Need and Scope of Educational Research
4. Steps in Educational Research
5. Role of Teacher as a Researcher

### Chapter 7: Education in Global Perspective

1. Global perspective of Education
2. Educational issues in global perspective
3. Comparative Education and Pakistan
4. Impact of globalization on education
5. Educational development in global perspective
## Contents/Themes and Learning outcomes

### Grade IX

<table>
<thead>
<tr>
<th>Themes</th>
<th>Themes &amp; Sub-Themes</th>
<th>Student Learning Outcomes</th>
</tr>
</thead>
</table>
| **Chapter: 1:** Concept of education and its scope | • Introduction to education  
• Islamic concept of education  
• Western/modern concept of education  
• Modes of Education  
• Roles of education  
• Functions of education | • Define Education  
• Describe the concept of Education  
• Explain the role and significance of education in society  
• Enlist modes of education  
• Enumerate the functions of education  
• Enlist the western and Islamic thinkers of education |
| **Chapter: 2:** Foundations of Education | • Philosophical foundation  
• Psychological foundation (learning chapter should be here)  
• Sociological foundation  
• Economic foundation  
• Islamic foundation | • Describe the concept of foundations of education  
• Define the term philosophy  
• Explain metaphysics, epistemology and axiology by giving examples  
• Describe the role of psychology in education i.e curriculum, learner, pedagogy and classroom management  
• Describe the role of sociology in education i.e cultural preservation, transmission and transformation.  
• Highlight the role of Islamic system of education in Pakistan |
| **Chapter: 3:** Human growth & development | • Concept of growth & development  
• Stages of growth  
• Types of development  
• Role of Education in growth and development (link it with learning) | • Define growth and development  
• Differentiate between growth and development  
• Enlist the stages of human growth  
• Enumerate the types of human development  
• Describe the role of education in human development |
| **Chapter: 4:** Teaching & Learning | • Concept of teaching & learning  
• Overview of teaching methodology  
• Overview of learning styles  
• Factors affecting teaching and learning | • Define teaching and learning  
• Enlist various teaching styles (teacher-centered& student-centered)  
• Identify different factors affecting students learning  
• Describe the qualities of a good teacher |
| **Chapter: 5:** Curriculum Development | • Concept of curriculum  
• Elements of curriculum  
• Foundations of curriculum  
• Significance of curriculum | • Define curriculum  
• Describe the elements of curriculum  
• Differentiate between curriculum, syllabus, and course  
• Enlist the foundations of curriculum |
### Process of curriculum development in Pakistan
- Co-Curricular activities and personality development
- Describe the importance of co-curricular activities and their role in personality development

### Chapter: 6: Assessment & evaluation in education
- Concept of measurement, assessment and evaluation
- Types of assessment
- General principles of assessment
- Test and characteristics of a good test
- Define assessment and evaluation
- Describe the types of assessment
- Enlist the general principles of assessment
- Define test and elaborate the characteristics of a good test

### Contents/Themes and Learning outcomes

#### Grade X

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-Themes</th>
<th>Students Learning Outcomes</th>
</tr>
</thead>
</table>
| **Chapter: 7: Guidance and counseling** | • Meaning, nature and scope of guidance and counseling  
• Difference between guidance & counseling  
• Approaches to guidance & counseling (humanistic & cognitive view)  
• Behavior guidance & counseling  
• Teacher as guide | • Define guidance and counseling  
• Identify the approaches of guidance and counseling  
• Differentiate between guidance and counseling  
• Describe the role of guidance and counseling in schools  
• Describe the importance of guidance and counseling in schools |
| **Chapter: 8: organization of school activities** | • Concept and scope of school activities  
• Overview of curricular and Co-curricular activities  
• Elements of co-curricular activities  
• Significance of co-curricular activities | • Describe the concept and scope of school activities  
• Enlist curricular and co-curricular activities  
• Describe the significance of co-curricular activities |
| **Chapter: 9: Educational Administration & Supervision** | • Concept of educational administration, management and supervision  
• Scope of educational administration  
• Types of educational administration | • Define term administration, management and supervision  
• Describe the scope of educational administration  
• Enlist the qualities of good administrator  
• Enumerate the types of administration  
• Elaborate the structure of educational administration at school level |
| Chapter: 10: Education and society | Qualities of good administrator | Role of school | Role of teacher | Relationship of education and society | Citizenship behavior education | Define society | Describe the role of school in society | Elaborate the role of teachers in society | Describe the concept of citizenship behavior |
| Chapter: 11: Education in Pakistan | Objectives of education in Pakistan | Historical overview of education in Pakistan (overview of conferences and plans) | Types of education | Levels of education | Early childhood education in Pakistan | Determine the objectives of education in Pakistan | Overview the history of education in Pakistan | Enumerates the levels of education in Pakistan | Describe the types of education in Pakistan | Give the concept of ECE | Enlist the problems and challenges of education in Pakistan |
| Chapter: 12: Trends in education | Environmental education | Population education | Poverty and its alleviation | Knowledge economy | Human rights education | E-learning | Define the concept of Environmental Education | Describe the importance of Population Education | Define poverty and its effects on education | Define the role of Education in awareness of human rights | Describe the term knowledge economy | Describe the concept of E-learning | Define Education for sustainable Development | Alleviation of Drug abuse through education |
Standards & Benchmarks for Curriculum Grade XI

Chapter-1
STANDARD: Understanding basic concepts related to ‘Education’ as a subject

BENCHMARK: Can explain importance, elements, functions, aims and foundations of education.

Chapter-2
STANDARD: Understanding Philosophy as a foundation of education

BENCHMARK: Can explain concept of philosophy and its impacts on aim of education, teaching, and curriculum with special reference to its role in an Islamic Democratic society like Pakistan

Chapter-3
STANDARD: Understanding Psychology as a foundation of education

BENCHMARK: Can explain Educational Psychology, its importance and its role in determining aim of education, teaching and curriculum

Chapter-4
STANDARD: Understanding Social and Economic Demands as a foundation of education

BENCHMARK: Can describe Society and its relationship with education; school as a social institution; and the role of social and economic needs and demands in determining aim of education and curriculum.

Chapter-5
STANDARD: Explain development of education in Pakistan

BENCHMARK: Can describe development of education in the Sub-continent during Muslim and British Era; development of education in post-independence Pakistan; aim of education and structure of education system in Pakistan.

Chapter-6
STANDARD: Discussing problems of education in Pakistan

BENCHMARK: Can understand problems of education in Pakistan like low literacy rate, low enrolment and large dropout rates, low quality of education, low
budgeting for education, female education, co-education and multiple streams of education

Chapter-7

STANDARD: Understanding Curriculum and its development in Pakistan

BENCHMARK: Can explain concepts of curriculum, syllabus and course; elements of curriculum and the process of curriculum development in Pakistan

Standards & Benchmarks for Curriculum Grade XII

Chapter-1

STANDARD: Understanding ‘Human Development’ and its related concepts

BENCHMARK: Can explain human growth and development and differentiate between them; factors affecting human development, principles of development, and individual differences.

Chapter-2

STANDARD: Understanding Learning


Chapter-3

STANDARD: Understanding Assessment in teaching-learning process

BENCHMARK: Can explain the concepts of measurement, assessment and evaluation; importance and types of assessment; scoring, grading and reporting results; and examination system in Pakistan

Chapter-4

STANDARD: Understanding guidance and counseling

BENCHMARK: Can explain concepts of guidance and counseling, importance and types of guidance and counseling and role and responsibilities of a guide and counselor.
Chapter-5

**STANDARD 5**: Understanding educational management and administration

**BENCHMARK**: Can describe educational management and administration, importance of management and administration, elements of management, basic principles of educational administration, and general structure of educational administration in Pakistan.

Chapter-6

**STANDARD**: Understanding the fundamentals of educational research

**BENCHMARK**: Can explain the concept, need and scope of educational research; scientific method of inquiry; steps in educational research; and role of teachers as a researcher.

Chapter-7

**STANDARD**: Understanding the fundamentals of global perspective of education

**BENCHMARK**: Can explain the concept, need and scope of global education its importance and impact on education
## Contents/Themes and Learning outcomes

### Education Curriculum Grade XI-XII

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-Themes</th>
<th>Student Learning Outcomes</th>
</tr>
</thead>
</table>
| **Chapter 1: Introduction to education** | • Concept of Education  
• Importance and Scope of Education  
• Functions of Education  
• Conservation  
• Transformation  
• Reformation  
• Aims of Education  
• Personal Development Aims  
• Spiritual and Moral Aims  
• Intellectual Aims  
• Healthy Life Aims  
• Economic / Vocational Aims  
• Citizenship Aims  
• Elements of Education  
• Foundations of Education | • Describe the concept of education  
• Explain the scope of education  
• Discuss the importance of education  
• Describe the functions of education  
• Explains contribution of education in moral and spiritual development  
• Give examples for role of education in intellectual development  
• Explain the role of education in making healthy life  
• Describe the role of education in the achievement of economic goals  
• Discuss the contribution of education in the development of good citizens  
• Elaborate different elements of education  
• Enlist and describe the foundations of education | |

| **Chapter 2: Philosophy and education** | • Concept of Philosophy  
• Philosophy and Education  
• Philosophy and Aims of Education  
• Philosophy and Curriculum  
• Philosophy and Moral Education  
• Pakistan as Islamic Democratic Society  
• Philosophy of an Islamic Democratic Society and Aims of Education  
• Philosophy of an Islamic Democratic Society and Curriculum of Education  
• Philosophy of an Islamic Democratic Society and Moral Education | • Describe the term of philosophy  
• Elaborate the relationship between philosophy and education  
• Discuss the role of philosophy in developing educational aims  
• Analyze the contribution of philosophy in curriculum development  
• Explain the role of philosophy in moral education  
• Discuss the religious and political philosophy of Pakistan  
• Explain the aim of education in an Islamic democratic society  
• Elaborate the curriculum in an Islamic democratic society  
• Discuss the moral education in the context of Islamic democratic society | |

| **Chapter 3: Psychology and education** | • Concept of Psychology and Educational Psychology  
• Scope and Importance of Educational Psychology | • Define educational psychology  
• Discuss the scope of educational psychology  
• Discuss the importance of educational psychology  
• Explain the relationship of psychology and education |
| Chapter: 4: Education and Society | • Concept of a Society  
• Relationship between Education and Society  
• School as Social Institution  
• Social Needs and Education  
• Social Needs and Aims of Education  
• Social Needs and Curriculum  
• Economic Needs and Education  
• Economic Needs and Aims of Education  
• Economic Needs and Curriculum  | • Explain the concept of Society  
• Differentiate between society and community  
• Describe the role of school in the development of individual and society  
• Understand Social needs to formulate Educational aims  
• Analyze elements of Curriculum based on societal: norms, values, beliefs, culture, and traditions  
• Discuss the contribution of economic needs in developing the curriculum |
| Chapter: 5: Education in Pakistan | • Historical Background  
• Salient Features of Education in Muslim India  
• Salient Features of Education in British India  
• Educational Policies  
• Constitutional Provisions for Education  
• Aims of Education in Pakistan  
• Structure of Education System in Pakistan  | • Develop insight from the system of education in Muslim India period  
• Understand the transformation in the British system of education  
• Enlist educational policies in Pakistan  
• State constitutional provisions for education  
• Discuss specific and general aims of education in Pakistan  
• Explain the hierarchical structure of education in Pakistan |
| Chapter: 6: Problems of Education in Pakistan | • Educational Problems  
• Low Literacy  
• Low Enrollment and Heavy Dropout  
• Low budgeting for education  
• Education and Politics  
• Inclusive Education  
• Quality of Education  
• Quality of Teachers  | • Debate on educational problems like low literacy, low enrollment and heavy dropout, quality of education, financial consideration, low budgeting, education and politics, and inclusive education.  
• Discuss the causes behind the stated educational problems  
• Visualize educational issues like female education, co-education, different streams of education |
<table>
<thead>
<tr>
<th>Quality of Physical Infra-Structure</th>
<th>Put forward suggestions to overcome the said problems and issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Examinations</td>
<td></td>
</tr>
<tr>
<td>Quality of Textbooks</td>
<td></td>
</tr>
<tr>
<td>iv. Low Investment in Education</td>
<td></td>
</tr>
<tr>
<td>Educational Issues</td>
<td></td>
</tr>
<tr>
<td>Female Education</td>
<td></td>
</tr>
<tr>
<td>Co-Education</td>
<td></td>
</tr>
<tr>
<td>Multiple Streams of Education</td>
<td></td>
</tr>
<tr>
<td>Chapter: 7:</td>
<td></td>
</tr>
<tr>
<td>Introduction to curriculum</td>
<td></td>
</tr>
<tr>
<td>Concept of Curriculum, Syllabus Course, and Textbook</td>
<td>Define and explain ‘Curriculum’</td>
</tr>
<tr>
<td>Elements of Curriculum</td>
<td>Define and explain ‘Syllabus’</td>
</tr>
<tr>
<td>Aims</td>
<td>Define and explain ‘Course’</td>
</tr>
<tr>
<td>Content</td>
<td>Define and explain ‘Textbook’</td>
</tr>
<tr>
<td>Methodology</td>
<td>Differentiate the terms Curriculum, Syllabus, Course, and Textbook.</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Describe elements of curriculum</td>
</tr>
<tr>
<td>Process of Curriculum Development in Pakistan</td>
<td>Describe elements of curriculum</td>
</tr>
<tr>
<td></td>
<td>Describe the process of curriculum development in Pakistan</td>
</tr>
</tbody>
</table>

**Contents/Themes and Learning outcomes**

**Grade XII**

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-Themes</th>
<th>Student Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter 1:</td>
<td>Human Development and Growth</td>
<td>Define and Explain the terms, development and growth</td>
</tr>
<tr>
<td>Human development</td>
<td>Factors affecting Human Development</td>
<td>Differentiate between growth and development with examples</td>
</tr>
<tr>
<td></td>
<td>Heredity</td>
<td>Describe the effect of Heredity on human development</td>
</tr>
<tr>
<td></td>
<td>Environment</td>
<td>Explain the effect of environment on human development</td>
</tr>
<tr>
<td></td>
<td>Principles of development</td>
<td>Discuss Which one has more influence on the development of individual personality</td>
</tr>
<tr>
<td></td>
<td>Individual differences and teaching learning process</td>
<td>Heredity OR Environment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Explain key principles of development</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Define the term “Individual Differences”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Describe Individual differences and explain their effects on teaching learning process</td>
</tr>
<tr>
<td>Chapter 2:</td>
<td>Concept of Learning</td>
<td>Define the term learning</td>
</tr>
<tr>
<td>Learning</td>
<td>Types of Learning</td>
<td>Differentiate among different the types of learning</td>
</tr>
<tr>
<td></td>
<td>Trial and Error,</td>
<td>Apply different laws of learning to practical situation</td>
</tr>
<tr>
<td></td>
<td>Observational Learning</td>
<td>Describe various factors affecting learning</td>
</tr>
<tr>
<td></td>
<td>Learning by Insight</td>
<td>Readiness</td>
</tr>
<tr>
<td></td>
<td>Learning by Conditioning</td>
<td>Motivation</td>
</tr>
<tr>
<td></td>
<td>Laws</td>
<td>Interest</td>
</tr>
<tr>
<td></td>
<td>Law of readiness</td>
<td>Attention</td>
</tr>
<tr>
<td></td>
<td>Law of exercise</td>
<td></td>
</tr>
</tbody>
</table>
| Chapter 3: Assessment In Education | • Law of effect  
• Law of association  
• Factors affecting learning  
• Readiness  
• Motivation  
• Interest  
• Attention  
• Attitude  
• Concept of, Measurement, Assessment and Evaluation  
• Need and Importance of Assessment  
• Types of Assessment  
• Scoring, Grading, and Reporting  
• Examination System in Pakistan  
• Describes the concepts of measurement, assessment and evaluation  
• Differentiate between measurement, assessment and evaluation  
• Describe need and significance of assessment in education  
• Differentiate among different formative and summative assessment  
• Describe the process of scoring and grading in education  
• Explain different methods of reporting results in Pakistan  
• Differentiate between internal and external examination system  
• Explain the structure of examination system in Pakistan  
• Identify different examination organizations at Punjab government level |
| --- | --- |
| Chapter 4: Guidance And Counseling | • Concept of Guidance and Counseling  
• Importance of Guidance and Counseling  
• Roles and Responsibilities of a Guide and a Counselor  
• Types of Guidance  
• Types of Counseling  
• Differentiate between the terms guidance and counseling  
• Describes the importance of guidance and counseling in Education  
• Explains the roles and responsibilities of a guide and a counselor  
• Identify different types of guidance  
• Differentiates among different types of counseling |
| Chapter 5: Introduction To Educational Management And Administration | • Introduction to Educational Administration  
• Importance of educational administration  
• Elements of Educational Management  
• Planning  
• Organizing  
• Commanding  
• Coordinating  
• Controlling  
• Basic principles of educational administration  
• Describe the term educational administration  
• Differentiate educational administration and management  
• Explain elements of educational management  
• Describe the principles of educational administration  
• Explain the structure of educational administration in Pakistan |
| Chapter 6: Introduction to Educational Research | • Principle of democratic leadership  
• Principle of cooperation  
• Principle of flexibility  
• Principle of planning  
• Principle of evaluation  
• Structure of Educational Administration in Pakistan | • Elaborate the concept of educational research  
• Evaluate different sources of knowledge  
• Discuss the nature and scope of the educational research  
• Analyze different elements of a research process  
• Discuss the role of teacher as a researcher |
| --- | --- | --- |
| Chapter 7: Education in Global Perspective | • Introduction to Research and Educational research  
• Ways of knowing  
• Need and Scope of Educational Research  
• Steps in Educational Research  
• Role of Teacher as a Researcher | • Explain Global perspective of Education  
• Describe the importance of global perspective in terms of educational innovations  
• Elaborate the Impact of globalization on education  
• Describe  
• Explain the importance of Comparative Education  
• Highlight educational development in global perspective |
## OVERALL WEIGHTAGE IN % AGE

### GRADE XI (PART-I)

<table>
<thead>
<tr>
<th>S#</th>
<th>NAMES OF UNITS</th>
<th>WEIGHTAGE</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Introduction to Education</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>2.</td>
<td>Philosophy and Education</td>
<td>15</td>
<td>22.5</td>
</tr>
<tr>
<td>3.</td>
<td>Psychology and Education</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>4.</td>
<td>Education and Society</td>
<td>15</td>
<td>22.5</td>
</tr>
<tr>
<td>5.</td>
<td>Education in Pakistan</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>6.</td>
<td>Problems of Education in Pakistan</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>7.</td>
<td>Introduction to Curriculum</td>
<td>14</td>
<td>21</td>
</tr>
</tbody>
</table>

### GRADE XII (PART-II)

<table>
<thead>
<tr>
<th>S#</th>
<th>NAMES OF UNITS</th>
<th>WEIGHTAGE</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Human Development</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>2.</td>
<td>Learning</td>
<td>17</td>
<td>25.5</td>
</tr>
<tr>
<td>3.</td>
<td>Assessment in Education</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>4.</td>
<td>Guidance and Counselling</td>
<td>15</td>
<td>22.5</td>
</tr>
<tr>
<td>5.</td>
<td>Introduction to Educational Administration</td>
<td>15</td>
<td>22.5</td>
</tr>
<tr>
<td>6.</td>
<td>Introduction to Educational Research</td>
<td>17</td>
<td>25.5</td>
</tr>
</tbody>
</table>
INSTRUCTIONAL APPROACHES AND TEACHING STRATEGIES

3.1 Introduction

The school curricula provide guidelines for learning and development at large. It is teacher’s responsibility to translate guidelines into meaningful learning experiences for students. This chapter outlines the central role of teachers in implementing the prescribed curricular materials. The chapter is organized into two parts: the first part attempts to underscores the need for teachers to move away from traditional teaching methods and embrace interactive learner-centered pedagogies, explaining how interactive student-centered instruction promotes in-depth learning and contributes to the multidimensional development of students. The second part discusses some of the progressive approaches to teaching and learning, explaining briefly how teachers can use them in the classroom, what innovative assessment methods and techniques can be used in interactive, learner-centered classrooms.

One of the fundamental objectives of effective teaching is to promote students’ understanding of the subject matter and students ‘and quality of students’ understanding is defined by how the concepts have been taught. Research on cognitive processing reinforces the importance of interactive learner-centered instruction to facilitate student in-depth learning. Contributions of renowned learning theorists, psychologists, and reformists such as Jean Piaget, L.S. Vygotsky, John Dewey, J.S. Bruner, F.B. Skinner, Harvard Gardner, and Paulo Freire have greatly influenced the contemporary theories of learning and thereby the current practices of global education. These theorists have challenged the traditional notion of knowledge from revealed and unchangeable to a dynamic and deductive process of reasoning and problem solving. These theorists maintain that learners gain knowledge within social framework that includes culture, social interaction, daily experience, and the history of the learner. Thus, the desired outcomes of learning are strongly influenced by the socio-cultural environment and the teacher is mediator between the learner and his or her social world. Hence Vygotsky (1978) advocates cultural elements, Dewey's (1933) role of experience in learning, Piaget's (1960) developmental stages and language and symbols systems, Bruner's
scaffolding (1986), Skinner's Stimulus-Response (1968), Gardner's multiple intelligence (1983), and Freire's (1974) dialogue method are essential elements of interactive learner-centered curriculum. A central feature of the major learning theories is that meaningful learning is better supported through activity and learner's cognitive engagement than by passive exposure to information. Research has provided several compelling reasons to support use of interactive learner-centered pedagogies.

Implementing interactive learner-centered pedagogies is not easily accomplished within the teaching learning climate that exists in many schools in Pakistan. Contemporary practices or student learning in many Pakistani schools rely heavily on mere recall of facts, formulae, rules, principles, and dates and seldom require students to demonstrate their ability to think, discuss, analyze data, connect ideas, or construct their own meanings (Government of Pakistan, 1998). Even though the textbooks upon which teachers and students depend heavily are often out of date and traditional student assessment practices encourage testing for recalling factual information rather than concept development and understanding: and, thereby, exerting a great deal of pressure on teachers to remain adhere to textbook teaching and serving the purpose of centralized examinations that are often based on textbook content rather than curriculum standards. The quality of teaching is often judged on the basis of student test scores in these examinations (Government of Pakistan, 2002).

Within this context, the traditional teachers are comfortable with traditional textbook teaching. Because it is more convenient to supply information through teacher's notes or rote memorization directly from the textbooks. On the other hand, the prospective teachers have to reflect deeply on the fact that a teacher's influence on children's learning goes far beyond the scope of supplying. The attitudes and values reflected in a teacher's conduct provide message even more powerful than those contained in the content of curriculum (Holborn, Widenn & Andrews, 1988).

The prospective teachers who, upon entering the real world of classroom, want to employ teaching approaches that maximizes the learning experience of individual students will have to make some difficult choices in order to achieve this overall goal. They will have to decide whether to serve the status quo or meet the diverse learning needs of the students. The choice for the teachers is not always clear. It is more often a personal decision that stems from one's concept of teaching and the level of professional commitment. The transition from educational student
to teacher necessitates some very real practical choices. They need to understand that it is better to be a learning facilitator than an information broker. Students should be taught to think for themselves and cooperate with others. From this viewpoint, teaching methods such as inquiry, role play, simulation games, and cooperative learning make sense. All these approaches in one way or the other emphasize the primacy of the learner's role in learning process.

3.2 Instructional Approaches

The prospective teachers should not only learn about and reflect on learning theories, philosophical issues in learning; they should be able to demonstrate their understanding in the teaching practice. Teaching practices refer to plan instruction, teaching in the real classroom and evaluating learning. Instructional strategies play a vital role in creating an environment in the classroom conducive to learning. In the literature a wide range of instructional strategies have been identified that help to create an environment in the classroom to engage students in learning. All these methods emphasize the primacy of learners' active engagement in the learning process. The elements of these interactive pedagogies integrate an inclusive classroom ethos, critical thinking, social skills development, a culture of encouragement, and reciprocal sharing and learning. In this chapter four popular instructional strategies are briefly discussed with an outline of how teachers can implement them in their own classrooms.

3.2.1 Lecture-Based Teaching

Lecture-based teaching is a transmission-oriented strategy in which the teacher transmits ideas, concepts and information to the students. Employing lecture method the teacher attempts to transmit as much information to students as possible in a limited time. The typical lecture method predominantly involves the teacher talking most of the time and students passively listening to the teacher. The teacher offers explanation of key concepts, there can be occasional questions by the teachers or students. The lack of active intellectual engagement by students may make the lecture boring consequently resulting in lack of interest which hinders learning. However, if used with different activities and exercises that call for students' participation, the lecture can stimulate students intellectually and facilitate learning. The following strategies can be used to intellectually engage students during a lecture.

Posing questions
In order to keep students engaged in a lecture, ask a question at the end of each theme/subtopic. This activity requires students to quickly process and use newly presented information to answer the question or solve the problem. Following the question give time to the students to come up with answers, call on a few students to share their answers, sum up and move on. To encourage students’ participation, use the Think-Pair-Share strategy; students think individually, share ideas with a colleague and then with the class. Sum up responses and move on. Alternatively, use Buzz groups. Buzz groups are small groups of three to five students who discuss the question before answering. Clear instructions regarding what to do, for how long and what is expected at the end of 'buzzing' must be given. After groups 'buzz', randomly choose students from 2-3 buzz groups to share their groups' discussion points or solutions. Sum up and move on.

**Inviting students' questions**

Before the lecture begins, ask students to enlist relevant questions which would like to receive an answer to. Teachers tailor their lecture to answer students’ queries. Encourage students to ask questions on completion of each theme/subtopic. Students' questions can be answered by the teacher or directed to the students inviting them to answer.

**Assessing students' in Lecture-Based Teaching**

Students' learning can be assessed by asking students to answer questions orally or fill in a 'one-minute' worksheet which asks them to write down the 2-3 most important things they learnt in the lecture. Alternatively, students' notes on a lecture can be reviewed, A few days later a test could be taken to assess students’ learning.

**3.2.2 Co-operative Learning**

Co-operative learning is a strategy in which students work together in small groups to maximize their own and each others' learning. In co-operative classrooms students have two responsibilities: (i) to earn and complete assigned material and, (ii) to make sure that all members of the group do so as well. A score of academic, social and psychological benefits are associated with working collaboratively in groups such as improved self-esteem, increased on-task time, increased higher order thinking, better understanding of material, ability to work with others in groups and improved attitudes towards school and teachers. Co-operative learning creates opportunities for students to use and master social skills necessary for living productive and satisfying lives.
Critical Components of Co-operative Learning

All the activities that students carry out in small or large groups are not necessarily co-operative. It is important to distinguish a cooperative group from other types of group activities. The following five elements are believed to be the primary characteristics of co-operative group learning (Johnson, Johnson & Holubec, 1993; Kagan, 1992):

1. Positive interdependence
2. Individual accountability
3. Social skills
4. Face-to-face interaction
5. Processing of group work and goal setting

Positive Interdependence

The essence of cooperative learning is the requirement that group members work together to accomplish a shared goal. Working together demands cooperation through dialogue, discussion, negotiation, planning, and decision. Thus, each group member has a part to play in the group activity, although the task may vary from student to student. According to Kagan (1992), positive independence can occur when achievement of individual students or teams are positively correlated. In other words, if learning of one student is associated with the learning of other students, it implies the individual students are positively interdependent. Teachers can create positive interdependence by structuring task such as distributing responsibility among individual student, limiting resources or creating rules to make students work cooperatively.

Individual Accountability

Co-operative learning can be effective only if individual group members assume responsibility for accomplishing the group goal and doing their share of the work. Another aspect of individual accountability is that each team member must learn the material. Individual assessment promotes ownership in team work. Role allocation can also facilitate in promoting individual responsibility (Kagan, 1992).

Social skills

To actively and effectively participate in co-operative learning students need an array of social skills. As groups first form, students need to become acquainted with one another, listen to one another. Share their ideas about the group goal and
expectations, and decide what needs to be done and how. Students need to be systematically taught the skills and given opportunities to practice.

**Face-to-Face Interaction**

Co-operative learning requires that group members interact with one another. Students discuss ideas, make decisions, and often engage in discussion and negotiations. Students are asked to complete a set of problems in their group and then share their answer.

**Processing of Group work and Goal Setting**

As students engage in co-operative activities, they are encouraged to reflect on how well they are achieving the group goal. They also consider how well they function as team-focusing on their successes as well as areas that need improvement. Goals for subsequent group work are set, together, students and their teachers build understanding about how do groups function well and why do they struggle that sometimes may result in a failure (Johnson, Johnson & Holubec, 1993; Kagan, 1992).

**Strategies to Facilitate Co-operative Learning**

Teachers need to devise effective strategies to help students carry out co-operative learning activities in a more systematic and time efficient manner. Some of the strategies that teachers worldwide are reported to have been using in co-operative learning lessons include the following:

**Think-Pair-Share**

Think pair share strategy requires the teacher to first pose a question to the class that requires students to think critically. This strategy can be divided into the following three steps:

- **'Think'**: Students think individually about the answer to the question for a specified amount of time and they write their answers individually.
- **'Pair'**: Students pair up with a partner. They discuss the question, expand on one another's ideas, and negotiate to finalize their response as a pair.
- **'Share'**: Students 'Share' their answers to the question with the entire class.

Think-Pair-Share structures are effective only when students participate equally practice social skills, and individually demonstrate what they have learned from their partners.
**Jigsaw**

Research indicates that students learn best when they teach what they have learnt to others. Jigsaw is the technique in which first students learn and then teach other students. It has four steps:

1. **Form cooperative groups which are call Home Groups.** Each Home Group member is given a different material to learn and explain to the rest of the group members. For example, the first group member must learn Page 1 of an assigned text, the second member Page 2, etc. To ensure that students learn the material at these stages teachers can provide them with study questions to guide their learning, and ask them to write their answers.

2. **Expert Groups are formed by grouping students with the same / assigned material together.** Expert Group members must study their material together, and plan ways to explain the material to other groups.

3. **Students return to their Home Groups and take turns explaining the concept to other group members.** The group goal is for every member of the group to master all the material presented.

4. **Check students’ mastery of the material and how well they have worked together.** For example, have students take a quiz or make presentations.

5. **Let them reflect on how well they worked in their Home Groups and identify ways to improve.**

**Assessment of Students in Co-operative Learning**

Success on the academic task is assessed by randomly asking students questions, checking their work, or through individual tests or quizzes. For the social skills task, students are evaluated through teacher observation and students' evaluation of their own and their group effectiveness.

**Planning and Conducting Cooperative Activities**

A lesson plan is helpful, especially for novice teachers, in planning co-operative learning activities, teacher might find it useful because outlining a lesson in advance the teacher easily remembers the elements of cooperative learning and the lesson can proceed smoothly according to the plan. For the 'prospect teachers' convenience, a sample for co-operative lesson plan is reproduced in the following format.

**Figure 2: Cooperative Lesson Plan Format**
3.2.3 Inquiry-Based Teaching

"Inquiry" is a broad term. It can be applied in a wide variety of daily life situations. Bayer (1971) views inquiry as one of the effective approaches scientists use to generate and validate knowledge. In classroom context, it refers to students' active involvement in the process of system is understanding of a topic or investigation into problem leading to deeper understanding of the concept or problem. Thus, it can be described as a process-oriented teaching strategy to teach students in a systemic way to approach 1.2 a problem or question encountered in various content areas. According to Driver (1983), inquiry at a fundamental level is a process of answering questions and solving problems based on facts and observations.

In using inquiry method the teacher changes his or her role as well as students' roles in several important ways. First he or she becomes a facilitator of the process rather than merely disseminating information.

There are two inquiry models of teaching.
1) Questioning or problem identification

2) Hypothesis generation

3) Data gathering

4) Assessment of hypothesis through analysis or interpretation of data

5) Data analysis

6) Generalization

**Presenting the Questions or Problem**

High-order thinking questions or problems are at the heart of an inquiry. The inquiry process begins with the presentation of a question or problem. From a concept pertaining to any content area the teacher generates a high-order thinking question or problem and invites students to find answers to the questions or seek solutions to the problems at hand. While communicating the inquiry question or problem, the teacher needs to make sure that students understand the language and concepts embedded within it.

**Hypothesis Generation**

Once the problem is identified or questions are specified, the students are involved in the process of generating hypothesis. A hypothesis is an unverified generalization or an envisaged tentative answer to the problem or an educated "guess". Hypothesis provides clarification of the problem and a clear direction for the students’ inquiry. A useful approach to hypothesis generation is brainstorming, in which a number of ideas are produced and subsequently analyzed and prioritized.

**Data Gathering**

Students are encouraged to use the hypothesis to guide the data-gathering procedures. The complexity of the process depends on the nature of question or problem. Data gathering involves observation, reading materials or experimentation, depending on the nature of the content area. Data sources vary depending on the nature of students’ inquiry (e.g. subject area, topic, hypothesis, etc.). Generating data from primary sources is often difficult in terms of time and efforts. Secondary sources such as texts and reference books offer easy way to collect the required information. During observation, students use their senses to observe objects and events to gather data pertinent to the question or problem under investigation.

**Assessment of Hypothesis through Analysis or Interpretation of Data**
Students interpret the gathered data to extract meaning and assess the hypothesis. In this phase of inquiry, students are responsible for assessing the hypothesis on the basis of data. Students interpret the data qualitatively or quantitatively through tables or graphs. They draw their conclusion and based on it validate or reject the hypothesis. This step provides a better opportunity to the students to learn more about the concept.

**Drawing Conclusion and Generalization**

This is a crucial stage of the inquiry process. At this point, students are expected to see the final product of their investigation. Students could arrive at a certain pattern to formulate their inquiry findings or results. Sometimes they may support the hypothesis established at the beginning of the inquiry and sometimes they may also disprove the hypothesis. In such a case the hypothesis needs to be restructured.

Thus the process of inquiry ends with acceptance, rejection or modulation of the hypothesis. Students tentatively generalize the hypothesis on the bases of conclusions. The generalization process then leads to new questions and the inquiry process reemerges.

**How to assess inquiry?**

Inquiry can be assessed through various ways. Teachers must focus on the process as well as products of inquiry. Inquiry can be done by individual student or assigned to small group of students. The individual or group performance at different stages of the inquiry can be assessed by using one or more ways suggested below:

**Observation:**

Students’ abilities and skill: can be observed during each stage of the inquiry. For example, you can observe a student conducting an interview or looking for relevant information in the library. Teachers can provide detailed descriptive feedback to the students on their abilities and skills observed.

**Documents analysis:**

Teachers can ask students to share anything they have documented during the process of inquiry. This can include the inquiry questions, the notes made from material read, analysis of findings, etc. Teachers can give marks on the clarity of the questions, relevance of material collected for analysis and clarity of analysis.
**Reflection on their experience:** Students could be asked to write their reflection on the process of doing the inquiry and the learning accrued to them.

**Written or Oral presentations:** Students either individually or in small groups could be asked to prepare a written report. This report could include the process as well as the outcome of the inquiry. Alternatively, students could be asked to present their inquiry findings to the whole class in the form of oral presentations, role-plays, panel discussions etc. Teachers may mark their presentations in terms of the quality of content, creativity in the presentations, or actions taken.

### 3.3 Guidelines for Developing Teaching Learning Resources

In our classrooms learning is limited to listening to the teacher’s explanations of textbook content. If students are to remember, understand and embody what they learn, they need to be intellectually engaged in learning. Because each student is unique and learns differently, using multiple and varied teaching learning resources is integral to facilitating learning of all students. In our schools and colleges, the government prescribed textbook is the only teaching learning resource. Rarely do teachers use other resources to support the learning. However, many other resources are available, accessible and affordable.

These are:

- Textbooks
- Teacher’s guides
- Students workbooks
- Newspapers and newsmagazine
- Books, reference books, encyclopedias, etc.
- Visual aids such as charts
- Videotapes and CDs
- Computer software Computers Internet (Websites, online brumes)
- Educational policies, curriculum documents, lesson plans etc.

In these chapter guidelines for developing textbooks, teachers guide and a student workbook have been provided.

### 3.3.1 Guidelines for Writing a Textbook

A textbook is an important teaching and learning resource and the most extensively used resource is in our class rooms. Both quality of content and presentation of textbooks have been criticized. High quality textbooks are the need of time. An effective textbook requires an understanding of success standards, benchmarks and
detail of students’ learning outcomes presented in the curriculum, an insight into how children learn at the developmental level for which the textbook is being developed, instructional strategies, list of activities that facilitate learning, and the tools for assessment of learning. Moreover, sustained practice is required to plan and develop textbooks that provide sufficient and appropriate input to students. This can be done by doing the following:

- Provide a table of contents including subtopics and an index and a glossary
- Provide an introduction which explains how the book is organized and how to use it.
- Provide accurate and up-to-date valid material so it can be trusted.
- Provide sufficient material to give students the knowledge they need to understand the concepts. Develop the skills and the required dispositions
- Provide sufficient knowledge to facilitate students’ understanding of the subject matter and prepare them for exams
- Be unbiased
- Vary illustrations from page to page.
- A wide range of relevant activities.
- Vary end-of-the-chapter exercises from chapter to chapter and encourage students to think, develop skills, and use information for a variety of purposes.
- Contextually relevant (feasible to use in classrooms) affordable, examples from context to increase relevance and meaning
- Be attractive and engaging

**Planning the textbook**

- Review curriculum to identify the standards, benchmarks and the student learning outcomes that are to be met through the textbook.
- Develop an outline for the textbook. i. Decide on the key ideas (knowledge, skills and values) to be included in each chapter
- Decide which facts and concepts are to be included, what vocabulary/terms will be used.
- Decide which activities would develop further understanding of the concepts
- Decide which illustrations are to be used. (Do they show what they are supposed to show? and Do they add anything to the text?)

**Illustration**
• Identify where illustrations are needed and prepare relevant illustrations.

Design
• Have the designer finalize layout of the text
• To make the textbook aesthetically attractive, colour, coding of different sections and different levels of headings have to be considered.

Edit the textbook
• Ensure text is in line with the curriculum
  • Ensure accuracy and authenticity of facts
  • Ensure clarity of instructions, illustrations, captions etc
  • If changing words check that the meaning has not changed

Planning a chapter
• Outline the content according to students’ learning outcomes covered within a specific chapter.
• Develop an outline, identifying topics and subtopics that will be included
• Decide on key ideas, facts, concepts, skills, values that are to be developed
• Decide potential illustrations
• Decide potential instructions and activities
• Read a range of authentic texts. If required, identify ideas, material that could be adapted to match the age and class level of the students. Fusing these give complete reference details for the selected texts.

Writing the chapter
• Begin with an introduction
• Write the texts as if talking to a group, keeping in mind the age and class of the students.
• Ensure content is up-to-date, accurate and developmentally appropriate.
• Ensure inclusion of the otherwise excluded themes such as women, minorities, and other perspectives,
• Ensure language is:
  • Consistent
  • Culturally appropriate is not disparaging, patronizing or stereotypes on the bases of religion, ethnic group, sex, age, or ability.
  • Gender neutral
• Grammatically correct
• Age appropriate
• Engage and hold readers’ attention
• Recall previous learning, where possible
• Structure writing so sentences are simple, paragraphs deal with single idea etc.
• Write a summary/concept map at the end of the chapter reviewing key knowledge and skills
• Identify illustrations where required
• Ensure end-of-chapter exercises that:
  ▪ Recall and integrate previous learning
  ▪ Engage students and develop their creativity
  ▪ Move from lower to higher order thinking
  ▪ Develop multiple intelligences
  ▪ Is contextually relevant

Editing the chapter

Ensure

• Accuracy and authenticity
• Content in line with the students’ learning outcomes the chapter seeks to realize
• Spellings and grammar are correct.

Review

• Have peers (experts) review and provide critical and constructive feedback
• Incorporate relevant feedback

Pilot Test

• Have teachers teach,
• Observe their teaching
• Revise where required.

Questions for review of the textbook

There are many textbooks available in the market and teachers have to make a choice to use the most relevant textbook. Here are some questions to ask when reviewing the content of a textbook. Affirmative answers will indicate a good quality textbook.

1. Is the content accurate and up to date?
2. Can the content facilitate in developing essential knowledge and skills?

3. Do the illustrations (maps, pictures, drawings, graphs) help students to understand the content better?

4. Do the end-of-the-chapter exercises encourage students to:
   a. think
   b. develop their skills
   c. be creative

5. Activities
   a. Are activities suitable for the needs of the learners?
   b. Do activities include students’ participation in real life issues?
   c. Do activities promote the requisite skills?

6. Are a variety of assessment strategies suggested?
   (e.g. fill-in-the-blank, memorized answers, project work, exhibitions, open-ended and divergent responses, etc.)

7. Does it motivate students to think?

8. Do the text, questions and suggested activities stimulate interest that would lead to further study?

9. Are there biases based on:
   i. religion
   ii. national origin
   iii. gender
   iv. occupation
   v. class

10. Does the textbook present issues from different perspectives?

11. Does it include current issues, problems, happenings?

12. Is it related to the goals of the curriculum?

13. Is a teacher’s guide included?

14. Is it attractive and appealing for readers?

15. Is the language readable, understandable, and easy to follow?

16. Check the appropriate column based on your observation.

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Adequate</th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Page size</td>
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<td>Line spacing</td>
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<td>Titles and sub-titles</td>
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<tr>
<td>Font size</td>
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</tbody>
</table>

17. Are the contents relevant to the needs, age and mental level of the students?

18. Is there an introduction and summary to each chapter?
19. Does it have?
   (a) an introduction explaining its organization
   (b) table of contents
   (c) glossary
   (d) index

20. Are there suggestions for:
   (a) further reading in the area
   (b) websites for further information

3.3.2 Guidelines for Developing a Teachers’ Guide

Textbooks usually come with a teachers’ guide which is aimed at informing teachers of how the textbook is written and how best to use it to facilitate students’ learning. Teacher guide provides detailed explanation of key concepts, the way to teach a particular topic and provide further examples that could be given to facilitate learning. A teacher’s guide serves to educate teachers and thus could be seen as a means of helping teacher's professional development.

Basic features of a teacher's guide:

A teacher's guide must be easy to understand and use. It must be based on the accompanying textbook and each chapter sequenced to correspond with the textbook. A teacher guide should:

- Provide an introduction to the guide explaining how to use it
- Help teachers to teach the text and extend learning by including the following:
  - extended activities and how to conduct them
  - teaching strategies
  - assessment strategies
  - teaching learning resources additional information sources
- Provide materials that teachers can photocopy, for themselves or for students
- Be easy to understand and use
- Expand and develop teachers' repertoire of knowledge and skills

How to write Teachers’ Guide

Planning (for each chapter)
Identify teaching strategies appropriate to context of teaching and learning and according to the textbook.

- Identify which teaching strategies are suitable for teaching knowledge, skills, dispositions in each charter.
- Identify what extended activities students could do with teacher's help to develop target knowledge, skills and dispositions.
- Identify resources needed for teaching strategies and extension activities.
- Identify sources information teachers can use to develop their knowledge (content0 and skills (pedagogy).
- Identify gaps in resources or strategies that will need to be developed or explained.
- Identify assessment strategies.

**Writing**

- Address the teacher(s)
- Give clear and sequenced instructions for each activity, adding resources where necessary.
- Write each chapter to correspond to text so teachers can cross-reference easily
- Identify constraints and strengths of each strategy or activity, especially if likely to be new for teachers
- Explain how to implement each instructional strategy, adding resources or sources of information as needed.
- Explain each assessment strategy (strengths, weaknesses, how to implement) and give examples of questions, tests
- Give teachers choices of strategy/activity for each chapter (let them decide which to use)

Explain how and where teachers can develop low-cost or no-cost resources.

**Illustrations**

- Decide where illustrations are needed and prepare brief for the illustrator.

**Design**

- Have designer finalize layout of the guide

**Edit**

- Check guide is ensure it is error-free
- Check that steps for each strategy/activity easily understood.
Check if contextually relevant-revise if needed, or remove.

Pilot

- Have teachers read the guide with the textbook
- Revise according to suggestions

3.3.3 Guideline for Writing a Workbook

Workbook exercises help to develop students' conceptual understanding of the concepts dealt with in the text, to develop skills and to apply knowledge to new situations.

**Basic features of a workbook:**

- Has many exercises and activities for each chapter, topic, subtopic
- The exercises and activities effectively help develop, practice and assess students' content
- knowledge, skills and higher order thinking
- Exercises are mistake free
- Corresponds to text - exercises and activities for same topic, chapter grouped together; presuppose knowledge and skills developed in text only different from exercises, activities in text and guide
- Non-repetitive in style, structure so as to engage students
- Clear instructions are given so it is easy for students to understand and follow
- illustrations/examples/explanations

**Planning (for each chapter)**

- Identify key learning outcomes knowledge, skills to be developed
- Decide what and how many activities will be used to develop students' knowledge, skills and higher order thinking (HOT)
- Decide what and how many exercises/activities will be used to assess students' knowledge, skills and HOT.
- Organize exercises and activities from lower to higher order and from activities for practice to activities for assessment

**Writing**

- Write each exercise/activity according to plan made
- Leave sufficient space for students' responses (where appropriate)
• Keep teaching/learning environment in view, ensure vocabulary is appropriate for grade level.
• Avoid repeating the style or structure of activities/exercises.
• Avoid using too many activities for one topic or skill. However, where possible, integrate skills and/or topics into exercises/activities at different points for deeper development and assessment.

Illustrator
• Decide where illustrations are needed and prepare an art brief for the illustrator

Design
• Have designer finalize layout of the workbook.

Edit
• Check appropriateness and accuracy
• Check if corresponds to text and promotes learning
• Check if instructions are clear and explicit
• Check if illustrations help in clarifying understanding or show what children are supposed to do,
• what product looks like
• Check for contextual constraints

Pilot
• Launch the textbook for students to read and attempt learning activities. Integrate feedback as needed.
4.1 What is Assessment?

Assessment is gathering quantitative and qualitative information, using a variety of tools and techniques that are easy to understand and interpret.

4.2 Why Do We Need An Assessment System?

- To assess teaching and learning.
- To show proficiency in a wide variety of tasks at a class level.
- To provide information to different stakeholders on how well standards are being met.

4.3 What is an Assessment System?

A coordinated process of gathering information to improve student learning forms an assessment system. Such a system must include:

- The specific purpose(s) for which the assessment is being carried out;
- A wide variety of tools and techniques that measure what students know, value, and are able to do;
- How the assessment can be interpreted and used to evaluate the standards and learning outcomes;
- What criteria will be used to determine performance levels for the standard?
  i. Partially Proficient  ii. Proficient  iii. Exceptional

4.4 Methods of Assessment

Four types of tools can be used to assess teaching and learning are:

1. **The selected response** - students select the answer to a question from two or more given choices. Such items are easy to evaluate but construction of good selected response items is time consuming. Their short response time allows more information to be assessed in a short time. However, since answer choices are provided, students can guess the correct answer without knowing the material. Scoring is quick and objective, since the teacher need only check if the single correct or best answer was identified for each

2. **A constructed response** format requires students to create or produce their own answer in response to a question or task. This allows teachers to gain insight
into students' thinking and creative processes, and to assess higher order thinking. However, such items are time-consuming to answer and score. Although they eliminate guesswork, scoring is more subjective and thus clear criteria are necessary to maintain validity. Below three types of constructed response items have been given:

**Brief constructed response items:** In such items, especially the fill-in type, it should be considered that whether the students have provided a very short, clearly delineated answer. They are objectively scored because there is typically a single correct answer that is easily identified.

**Essay Items:** These items may require students construct restricted -responses that limit the length, content and nature of the answer; or extended -responses that allow greater freedom in response.

**Performance assessments:** These items require students to construct a more extensive response to a well-defined task, often involving real-world application of knowledge and skills. Performance assessments can be used to evaluate both processes, such as planning a lesson and its application in class room.

**Different Assessment Methods**

<table>
<thead>
<tr>
<th>Selected-response</th>
<th>Constructed response</th>
<th>Teacher observation</th>
<th>Student self-assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Multiple choice</td>
<td>Brief Constructed-Response Items</td>
<td>Performance Tasks</td>
<td>Essay items</td>
</tr>
<tr>
<td>• Binary-choice (e.g., true/false)</td>
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<tr>
<td>• Matching</td>
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<td></td>
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<tr>
<td>• Interpretive</td>
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</tbody>
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<th>Selected-response</th>
<th>Constructed response</th>
<th>Teacher observation</th>
<th>Student self-assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Short answer Fill-in (may be oral or written)</td>
<td>Products</td>
<td>Essay items</td>
<td></td>
</tr>
</tbody>
</table>

**Essay Items**

- *Formal* • Restricted-response
- *Informal* • Extended-response

**Product**

- Paper
- Project
- Poem
- Portfolio
- Video/audiotape
- Spreadsheet
- Web page
- Exhibition
- Reflection
- Journal
- Graph
- Table
- Illustration

- Speech
- Demonstration
- Dramatic
- Reading
- Debate
- Recital
- Enactment
3. **Teacher observations** are so common that they are often ignored as a form of assessment. However, teachers constantly observe and listen to students as they work. In addition, Non-verbal communication, such as attention, looks of frustration, and other cues, gives greater insight than verbal feedback. Observation is also important in assessing performance tasks, classroom’ climate, teacher effectiveness, and other dimensions of the classroom.

4. **Self-assessment refers to students evaluating themselves.** In self-evaluation of academic achievement, students rate their own performance against the established standards and criteria. Students may also be asked to answer questions that reveal their attitudes and beliefs about themselves or other students as part of their self-reporting. Within the four types of assessment methods, some commonly used formats have been briefly described below:

4.5 **Selected Response**

**Multiple-Choice Items**

Multiple choice items have a short question or statement, followed by multiple choices from which students must pick the correct or best answer. The question or statement is called the stem, and the choices are called options. The options contain one correct or the best answer choice called answer or key, and two or more incorrect choices are called distracters.

**Format**

After reading each question, circle the letter representing the choice you think is the best answer:

Imitation is a key attainment of which of Piaget's stages of development?

a) Sensory-motor period  
b) Formal operational period  
c) Pre-operational period  
d) Concrete operational period

**Strengths and Weaknesses**

- Relatively difficult to write, especially plausible distracters.
- Having students pick the 'correct' answer assesses knowledge and understanding.
- Having students pick the 'best' answer measures higher order thinking such as reasoning and critical analysis.
• With answer choices provided, students focus on recognizing information rather than recalling or memorizing it.
• By evaluating students' wrong answers, teachers can see what students misunderstood or need to be clarified.

Hints for designing better multiple-choice items (Teachers should be able to answer 'yes' to each checklist question).

- Does each stem contain a single, main problem stated simply and incorporating all the relevant information?
- Have excess wordiness and overly complex language been avoided?
- Have negatives like "no," "never," "none," "not" been avoided (Students tend to overlook these. If such words must be used, bold and/or capitalize them)?
- Is the correct answer unquestionably right and complete? Is it the ONLY correct or best choice?
- Are all the options plausible or reasonable? Have obviously ridiculous options, options that say the same thing, or those that are clearly opposite in meaning, been revised (Students should not be able to guess the answer by elimination)?
- Are the options arranged systematically i.e. in alphabetical/chronological/numerical order (This ensures students cannot guess the position of the correct answer)?
- Are the number of options for each item appropriate to the students' age/grade levels (2 or 3 options for lower grades and 4 or 5 options for older students)?
- Have "clues" to the correct answer been avoided (making the correct option longer, more complex, or grammatically different from other options, using a/an to show if the correct option begins with a vowel)?
- Are all options for an item as brief and as clearly stated as possible (measure knowledge not reading ability)?
- Has "all of the above" been avoided as an option (If students find one WRONG answer, "all of the above" cannot be correct. If students find two RIGHT answers "all of the above" must be correct)?
- Has "none of the above" been avoided as an option?

4.6 Binary Choice Items

A question with only two response categories is a binary-choice item. In such items, a declarative sentence that makes a claim about content or relationships among content is followed by the two Choices. The most popular
binary-choice item is the true/false question; other examples include
correct/incorrect, yes/no, fact/opinion, agree/disagree, etc.

<table>
<thead>
<tr>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circle 'T' if you think the statement is true. Circle 'F' if you think the statement is false.</td>
</tr>
</tbody>
</table>

1. Plants need water to grow. T/F
2. The area of a square is found by squaring the length of a side. T/F

**Strengths and Weaknesses**

- Can be used to assess knowledge, values, opinions (depending on which content
binary choices are given)
- Restrict students' response to two opposing choices, so cannot show a range of
values or opinions
- Guessing allows students a 50% chance of being right.

**Hints** for designing more effective binary choice items (Teachers should be able
to answer 'yes' to each checklist question).

- Have important knowledge targets, values or opinions been assessed (versus
tricky, trivial or irrelevant material)?
- Is each item expressed in a single, short statement in clear, simple language?
- Have items using 'no', 'not' or negative prefixes (un - as in unimportant) been
omitted (difficult to understand especially if the "false "option is being
considered.)?
- Have vague statements that are partly true, partly false or use words with different
interpretations ("sometimes", "a few") been avoided
- Have generalizations such as "all", "none," "impossible," "always," "never,"
etc., been avoided (items using such words are likely to be seen as false)?
- Do the items avoid copying from textbooks (students assume that these statements
are true)?
- Is the answer type consistent with the statement (e.g. agree/disagree for questions
about the students, opinion)?
- Can students pick one of the two choices as the absolute and complete answer?
  this is critical
  a) Are there approximately the same number of true and false items?
  b) Have patterns of the answers been avoided?
- Is the format clear?
4.7 Matching items

In a matching item, the items on the left are called the premises. In the right hand column are the options. The students' task is to match the correct option with each of the premises.

<table>
<thead>
<tr>
<th>Format of a typical matching item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Match the historical event on the left with the year in which it happened on the right. (Put the letter of your chosen answer in the blank next to the number.</td>
</tr>
<tr>
<td>1_____Jinnah issued his fourteen points</td>
</tr>
<tr>
<td>2_____Pakistan became an independent country</td>
</tr>
<tr>
<td>3_____World war I began</td>
</tr>
<tr>
<td>4_____Zia-ul-haq became president of Pakistan</td>
</tr>
<tr>
<td>5_____World war II began</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Strengths and weakness

- Effectively assess students' knowledge and its associations/relationships
- Can assess a great amount of factual information within a single topic

Hints for designing better matching items (teachers should be able to answer `yes' to each checklist question)

- Is the exercise presented in a clear format (premises on the left numbered, options on the right and ordered by letters)?
- Are the instructions clear and explicit (saying how and where students put their answer, and whether each option can be used only once, more than once or not at all)?
- Are all premises, and all options, of the same category (e.g. all premises are shapes, and all options are formulas used to find areas of shapes)?
- Are there 5-10 premises?
- Are there 3-4 more options than premises?
- Are the premises longer and more complex than the options (but clear to understand)?
- Are the premises and options arranged in some systematic order (alphabetical, chronological, etc.)?
• Is there only one correct option for each premise?
• Do both lists (premises and options) appear on the same page?
• Are the lists as free of irrelevant clues as possible?

Examples from subject areas

4.8 Interpretive Exercises

Interpretive exercises contain brief information or data, followed by several questions. The questions are based on the information or data, which can take the form of maps, paragraphs, charts, figures, a story, tables or pictures.

Format

<table>
<thead>
<tr>
<th>Cities</th>
<th>Min</th>
<th>Max</th>
<th>Outlook</th>
<th>Humidity</th>
<th>Min</th>
<th>Max</th>
<th>Outlook</th>
<th>Min</th>
<th>Max</th>
<th>Outlook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Islamabad</td>
<td>21</td>
<td>32</td>
<td>Sunny</td>
<td>78</td>
<td>21</td>
<td>33</td>
<td>Sunny</td>
<td>21</td>
<td>33</td>
<td>Sunny</td>
</tr>
<tr>
<td>Karachi</td>
<td>25</td>
<td>31</td>
<td>Sunny</td>
<td>74</td>
<td>26</td>
<td>32</td>
<td>Sunny</td>
<td>26</td>
<td>32</td>
<td>Th-Storms</td>
</tr>
<tr>
<td>Lahore</td>
<td>21</td>
<td>31</td>
<td>Sunny</td>
<td>78</td>
<td>21</td>
<td>31</td>
<td>Sunny</td>
<td>21</td>
<td>33</td>
<td>Sunny</td>
</tr>
<tr>
<td>Multan</td>
<td>25</td>
<td>36</td>
<td>Sunny</td>
<td>49</td>
<td>25</td>
<td>37</td>
<td>Sunny</td>
<td>25</td>
<td>40</td>
<td>Sunny</td>
</tr>
<tr>
<td>Quetta</td>
<td>15</td>
<td>32</td>
<td>Sunny</td>
<td>10</td>
<td>15</td>
<td>33</td>
<td>Sunny</td>
<td>15</td>
<td>33</td>
<td>Sunny</td>
</tr>
<tr>
<td>Sialkot</td>
<td>21</td>
<td>30</td>
<td>Sunny</td>
<td>79</td>
<td>22</td>
<td>31</td>
<td>Sunny</td>
<td>22</td>
<td>34</td>
<td>Sunny</td>
</tr>
</tbody>
</table>

Read the above information. Now, pretend you are a weather forecaster and answer the following questions.

1. Circle T for true or F for false.
   Karachi will be hotter than Lahore tomorrow. T F

2. Circle the correct answer.
   The temperature in Islamabad over the three-day period is:
   a) Increasing
   b) Decreasing
   c) Staying the same

Strengths and Weaknesses

• Can assess interpretation, analysis, application, critical thinking, and other reasoning skills
Multiple questions about the same information allow reasoning skills to be measured in greater depth

Allows reasoning skills to be assessed separately from content knowledge of the subject (in other

Selected-responses, unsuitable answers can be due to students’ lack of knowledge or lack of reasoning skills)

Allows students to focus on applying and connecting knowledge

Uses information in formats that students encounter daily, such as maps and newspaper articles, which increases meaning and relevance of the exercise

Students must use the reasoning skill the exercise asks for; thus, teachers can see which skills individual students need more practice with

Exercises are time-consuming to construct (appropriate material must be located/developed, along, with multiple questions)

Disadvantages students with poor reading ability

Cannot see students’ ideas or reasoning methods

Hints for writing better Interpretive Exercises (Teachers should be able to answer ‘yes’ to each checklist question).

➢ Does the exercise test reasoning (rather than recall or simple understanding)?

➢ Before the exercise was written, were reasoning skills to be assessed (critical thinking, predicting, comparison, etc.) decided upon?

➢ Is introductory material new for the students?

➢ Is introductory material brief (not more than students need to answer the questions, 2-3 paragraphs at most for older students)?

➢ Are there several questions for each exercise?

(Note: Questions in interpretive exercises can also of the short answer or fill-in type especially for older students)

4.9 Constructed Response

Fill-in/Completion Items

Fill-in/Completion items assess knowledge by requiring students complete a statement. They can also ask students to label diagrams or write ‘a one-word answer to a’ short question.

Format of a typical fill-in item

Thinking is dominated by __________________________ during the period of pre-operational thought.
Strengths and Weaknesses

- Cannot check understanding or higher order thinking
- Easy to construct.
- Responses can be words, numbers or symbols.
- Responses are short, so students can be tested on more information in less time.
- Offer least freedom of student response, so ideal to check factual recall.
- Quick and reliable scoring.
- Be careful that poorly written questions can leave students confused to the correct answer.

Hints for designing better fill-in items (Teachers should be able to answer ‘yes’ to each checklist question).

➢ Have direct questions been used, where feasible, rather than incomplete statements?
➢ Are questions and directions clear, brief and easy to understand?
➢ Do the items avoid copying textbook language (copying tends to encourage rote learning)?
➢ Have clues been avoided (A/an, blanks of different lengths, verbs in plural form, etc.)?
➢ Have two or less fill-in blanks been used?
➢ Are blanks at the end of the statement (Multiple blanks at many places confuse students)?
➢ Is it clear that each answer must be short (one word, number or symbol)?
➢ Is there only one agreed-upon or, correct answer?
➢ Is the specificity of the answer clear (For numerical answers, the units should be given for ‘where’ questions, indicate if a city or country is required)?

Examples from subject areas

Short Answer

Short-answer items are questions that call for students to write short answers (3-4 sentences at most), such as definitions or listing characteristics.

Format

1. Define the term ‘learning’

2. Kholberg’s two main stages of moral development.
Strengths and Weaknesses

- Good for assessing knowledge
- Can also assess understanding and reasoning
- Easy to construct since structure similar to instruction (question-and-answer) in class, so natural to teacher and student.

Hints for designing better short answer items (Teachers should be able to answer 'yes' to each checklist question).

➢ Is it clear to the teacher whether knowledge, understanding or reasoning is being assessed?
➢ Are textbook questions avoided?
➢ Is the question brief and easy to understand?
➢ Is it clear to students that the answer must be short? (Use lines to indicate the maximum length of the answer)
➢ Is the specificity of the answer clear?

4.10 Essay Items

Such items literally have students answer a question by writing an essay. The length, nature and content of the essay is dependent on the question posed, so responses may be restricted or extended.

Format

'Describe the different functions of education, explaining the role of education in society' (Extended).

"Compare main features of National Education Policy 1998 and National Education Policy 2010 regarding primary and secondary education"

Strengths and Weaknesses

- Require students to sequence and integrate many separate ideas into a meaningful whole, interpret information, give arguments, give explanations, evaluate the merit of ideas, and conduct other types of reasoning
- Help students see themes, patterns, relationships
- Allow flexibility in responses
- Can evaluate students' ability to communicate their ideas
• Reading and scoring answers is time-consuming, especially if done so that meaningful feedback is given to students
• A single person, the teacher, judges the answers, so variations in mood, expectations, the order in which students are evaluated, and other factors, affect the professional judgments that are made.
• Cannot assess lots of information or multiple reasoning skills at once

**Hints** for writing essay items (Teachers should be able to answer 'yes' to each checklist question)

• Can the targeted reasoning skill be measured by an essay (e.g. comparison, analysis, deduction etc.)?
• Does the question clearly indicate the desired response (Students should know exactly what and how much information to use and should not be confused as to what aspect is asked for)?
• Does the question allow for more than a right or wrong answer and/or process, justification, examples?
• Is there enough time to answer the questions?
• Are choices among several questions avoided?
• Has the teacher drafted many possible responses so she/he knows what to expect?
• Are the scoring criteria clear to teachers and students?

**Scoring Essays.** Scoring is difficult because each essay is unique. Obviously scoring is subjective. So it is important to practice a few procedures to ensure that professional judgments are accurate.

1. After constructing the essay question, even before administering it to students, outline what would be the best answer to the question. (Doing this lets teachers further clarify the question and prevents their being influenced by the first responses they read).

2. Then, select an appropriate scoring method - here you can proceed in 3 ways:

   - **Holistic/Rating Method:** Using the outline as the best answer, the teacher reads each essay as a whole, forms a general impression and puts it in one of the rating categories (exceptional, proficient, partially proficient, etc.).

     **Advantages:** simpler and quicker than the analytical methods

     **Disadvantages:** more subjective than the analytical method, no clear justification for the assigned grade, no specific feedback to students about problem areas
Recommended for shorter essay items (half page) which are more likely to elicit uniformly structured responses.

- **In between Method:** Using the outline as the best answer, teachers construct samples of different answer categories (partially proficient, proficient, exceptional, etc.). Then use these samples to decide criteria for each category. These criteria are used to separate and score student essays.

*Advantages and disadvantages* are similar to those for the holistic method except that this way is more objective.

- **Analytical (point-score) Method:** The outline for best answer is broken down into points of information. Each point is assigned a score (awarded to student if essay contains that point).

Targeted writing skills are also assigned point values. Making a checklist with criteria and points is the most objective way to score an essay.

*Advantages:* increases objectivity and reliability of scoring, makes it easier for the teacher to discuss and justify marks with students and parents.

*Disadvantages:* Laborious and time-consuming to prepare the checklist and score the responses

**Recommended for extended type essay questions (2-3 pages long)**

**Hints** for more valid scoring Essays (Teachers should be able to answer 'yes' to each checklist question).

- Is the answer outlined before testing students?
- Is the scoring method-holistic or analytic-appropriate?
- Has it been decided exactly how important writing skills are (Does each skill get point, does better writing change the category of a response, or are spelling mistakes irrelevant)?
- Are writing skills, Vocabulary, spelling, neatness important (e.g. for maths, it isn't important if students misspell a word)?
- Is the identity of the student anonymous where possible?
- When scoring many essays, has one item been checked for all papers in one sitting (i.e. all question 1's, then all question 2's, and so on)? This allows teachers to apply criteria more consistently.
- When scoring many papers has the order of papers been changed between items (after checking all question 1's, were papers shuffled before checking all
question 2's)? This prevents teachers' fatigue and the quality of students' first replies from influencing further scoring.

Sample scoring checklist

| Content: Convincing, pertinent, specific, perceptive | 4 |
| Point of View: Clear, consistent, appropriate in approach | 3 |
| Essay Organization: Logical, coherent, unified, suitable to purpose, Orderly developed to an effect or conclusion | 5 |
| Paragraph Organization: Precise statement of topic, effective development. | 1 |
| Style: Interesting, original, expression suited to content, flow | 3 |
| Sentence Structure: Skillful use of a variety of sentence patterns (such as contrast, balance, repetition, and exclamation). | 1 |
| Diction: Vocabulary appropriate for grade level, vivid, precise. | 2 |
| Use of Language Conventions: Correctness in punctuation, spelling, and grammar | 1 |
| **Total** | **20** |

4.11 Performance-based Assessments

Performance-based assessments involve teachers observing and assessing students' demonstration of a skill/process and/or competency in creating a product/making a presentation as a result of a skill/process.

Characteristics of Performance-based Assessments

- Students perform, create, construct, produce, or do something
- Deep understanding and/or higher order thinking skills are needed
- Involves significant work that usually takes days to weeks to complete
- Calls on students to explain, justify, and defend
- Performance is directly observable
- Involves engaging ideas of importance and substance
- Criteria and standards are specified and explained to students along with the task
- There is no single best product or correct process
- Usually students work with real-world contexts and constraints
## Strengths and Weaknesses

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Can assess communication, presentation, psychomotor skill</td>
<td>▪ Scoring may be very subjective.</td>
</tr>
<tr>
<td>▪ Through products, can assess performance of process/skill, and also see what learning students got from it</td>
<td>▪ Inconsistent student performance across time may result in inaccurate conclusions.</td>
</tr>
<tr>
<td>▪ Teaching and learning occur during the assessment.</td>
<td>▪ Few samples of student achievement.</td>
</tr>
<tr>
<td>▪ Students find real-life application and contexts engaging.</td>
<td>▪ Requires considerable teacher time to prepare and student time to complete.</td>
</tr>
<tr>
<td>▪ Provide a different way for students to show what they know and can do.</td>
<td>▪ Difficult to plan for amount of time needed because new method, students work at different paces, use different processes.</td>
</tr>
<tr>
<td>▪ Students learn how to ask questions, and since such tasks often involve group work, to work effectively with others.</td>
<td>▪ Cannot generalize proficiency to include other knowledge or skills.</td>
</tr>
<tr>
<td>▪ Emphasis on higher order thinking and application - allows in-depth assessment of main content ideas.</td>
<td>▪ Difficult with time constraints to give each student meaningful feedback at different times as they work on the process.</td>
</tr>
<tr>
<td>▪ Forces teachers to establish specific criteria to identify successful Encourages re-examination of instructional goals and the purpose of schooling.</td>
<td>▪ Needs significant energy and resources from both teacher and students.</td>
</tr>
</tbody>
</table>

**Hints** for creating engaging and real-world performance-based tasks with real teaching and learning benefits teachers should be able to answer 'yes' to each checklist question.

- Is performance-based assessment appropriate for learning targets?
- What essential content and skills targets should be integrated?
- Are multiple targets included?
- Has the kind of task been decided/Restricted? (Targets a narrowly defined skill with a brief response) or extended (more complex, involve more skills and knowledge)?
- Have clear, detailed descriptions of the task and its context been developed to indicate what process and/or products are wanted, whether work is individual or in groups, if help is allowed, what resources are needed, what the teacher's role will be?
- Does the task question given to students identify the context, the final outcome, what students should do, and the scoring criteria?
- Is the task feasible? Will students be able to complete it successfully?
- Are multiple products and processes possible so that exploration and judgment are necessary?
- Is the task integrative, challenging, stimulating, requiring inquiry and innovation?
- Is the task cyclic, with repeated Performance-Feedback-revision occurring?
- Does the task have long-term value beyond school?
- Are constraints for completing the task included?
- Are criteria for scoring included?

4.12 Scoring Rubrics

In performance-based assessment, teachers must be able to evaluate the process and/or the product. To do this validly, reliably and fairly, teachers must establish scoring rubrics and share these with students before they begin the task. Scoring rubrics consist of performance criteria and a way to rate them.

<table>
<thead>
<tr>
<th>Quantitative</th>
<th>Holistic</th>
<th>Analytic</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>All criteria assessed by single overall score</td>
<td>i. Each criteria checked and scored separately.</td>
<td>Uses brief verbal description</td>
</tr>
<tr>
<td>ii.</td>
<td>Difficult to give feedback</td>
<td>ii. In-depth description of each criterion</td>
<td></td>
</tr>
<tr>
<td>iii.</td>
<td>Difficult to judge a student between two categories</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Hints** for Writing and Implementing Rubrics (Teachers should be able to answer 'yes' to each checklist question).

- Do criteria focus on the most important aspects of the performance?
- Is the type of rating matched with purpose of the assessment?
- Are the traits directly observable? (have criteria such as attitude, interest and effort, that are easily or subject to bias been avoided?)
- Are the criteria understandable? (teachers can give students examples of work that shows criteria they are looking for)
- Are the traits clearly defined?
➢ Is bias minimized? (teachers can use colleagues’ reviews and student’s self-evaluation or peer evaluation)

➢ Is the scoring system feasible?

### EXAMPLE OF A RUBRIC

An example of a rubric to assess teaching in the classroom TEACHING IN REAL CLASSROOM

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>Excellent</th>
<th>Good</th>
<th>Adequate</th>
<th>Unacceptable</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Preparation:</strong> The extent to which the teacher demonstrate knowledge of pedagogy in lesson planning</td>
<td>Has written lesson plan with clear and specific objectives, number of relevant activities and specific activities for assessing outlined objectives.</td>
<td>Has written lesson plan with clear objectives with at the most one non-specific objective, some relevant activities, specific activities for assessment of the outlined objectives.</td>
<td>Has written lesson plan with general objectives consist of few relevant Activities and specific activities for assessment of the outlined objectives.</td>
<td>Has untidy written lesson plan with unclear objectives and irrelevant activities and no activity for assessing objectives.</td>
<td>NO lesson plan, NO objectives, 1-2 irrelevant activities with NO assessment activity.</td>
</tr>
<tr>
<td><strong>Communications while lesson delivery</strong></td>
<td>Frequent use of eye contact to Motivate students and to keep them on tasks.</td>
<td>Frequent uses of eye contact to motivate students for the lesson but not for keeping them on tasks.</td>
<td>Occasionally make eye contact but failed to keep them on task.</td>
<td>Seldom Uses eye Contact or Interact with students.</td>
<td>No eye Contact and No interaction with students.</td>
</tr>
<tr>
<td></td>
<td>Voice is very clear, articulate and uses perfect grammar</td>
<td>Voice is clear to a good extent, Fluent and minor grammatical errors</td>
<td>Adequate fluency in voice, few grammatical error</td>
<td>Unclear voice with frequent grammatical errors</td>
<td>Unclear voice with frequent major grammatical errors</td>
</tr>
<tr>
<td></td>
<td>Communicates at instructional level, dialectic skills including ability to argue, listen to and get engaged in a discourse, gender sensitivity.</td>
<td>Communicates at instructional level, ability to listen to but failed to argue and get engaged in a discourse but shows gender sensitivity.</td>
<td>Communicates at instruction Al level, Lack of dialectic skills, occasional gender exclusive language is used.</td>
<td>Communicates at instruction al level, dialectic Skills and gender sensitivity is rarely shown</td>
<td>No strategy was used to promote effective communication, unable to argue, listen to and get engaged in a discourse. No gender sensitivity.</td>
</tr>
<tr>
<td></td>
<td>Frequently use appropriate facial expressions and body language correctly</td>
<td>Occasionally use appropriate facial expressions and body language</td>
<td>Facial expression and body language are generally open and accepting</td>
<td>Inappropriate use of facial expression and body language</td>
<td>No facial expression and body language used</td>
</tr>
<tr>
<td><strong>Us of Instructional Material</strong></td>
<td>Use of no/low cost materials at the level of students appropriately</td>
<td>Material uses appropriately most of the time keeping in view student’s level</td>
<td>Material uses with inappropriate use some of the time</td>
<td>Inappropriate use of materials</td>
<td>No instructional material was used</td>
</tr>
<tr>
<td><strong>Pedagogical Strategies</strong></td>
<td>Frequency in using variety of teaching strategies (role play, adapt knowledge to the</td>
<td>Less variety in pedagogical strategies but they were relevant to the lesson</td>
<td>Pedagogical strategies are not very strong and innovative</td>
<td>Pedagogical strategies were not innovative at all.</td>
<td>No variety...</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th><strong>Content Knowledge conveyed</strong></th>
<th><strong>Reveals an in-depth thorough knowledge of content</strong></th>
<th><strong>Good content Knowledge (content Knowledge is beyond book)</strong></th>
<th><strong>Knowledge level is limited so the textbook only knows content that is sometimes incomplete or not up-to-date</strong></th>
<th><strong>Conveys knowledge content that is frequently inaccurate and outdated</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demonstrate effective presentation skills</strong></td>
<td><strong>Demonstrate mostly effective skills of presentation</strong></td>
<td><strong>Presentation skills are inconsistent</strong></td>
<td><strong>Inaccurate ways are adopted to present ideas</strong></td>
<td><strong>Evidence of presentation skills is week</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Classroom Management</strong></th>
<th><strong>Providing opportunities for students to act responsibly and dealing with indiscipline with the use of positive and negative reinforcement</strong></th>
<th><strong>Students are most of the time provided with the opportunity to demonstrate responsibly. Dealing with indiscipline using positive reinforcement only</strong></th>
<th><strong>Inconsistently provides Opportunities for students to develop responsible behavior and sometimes unable to deal with indiscipline</strong></th>
<th><strong>Inappropriate to use of reinforcement for dealing with discipline and less Opportunities for students to demonstrate responsible behavior</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Encourage each pair to rehearse the presentation on their own or present it to their friends and get constructive feedback to improve: content, structure, time, clarity and audibility of voice and use of visual aids.</strong></td>
<td><strong>Provides no Opportunities for students to demonstrate responsible behavior and unable to deal with indiscipline</strong></td>
<td><strong>Provides no Opportunities for students to demonstrate responsible behavior and unable to deal with indiscipline</strong></td>
<td><strong>Provides no Opportunities for students to demonstrate responsible behavior and unable to deal with indiscipline</strong></td>
</tr>
</tbody>
</table>

### 4.13 Performance-based Task

1. Ask students to pair up with a partner. Ask each pair to choose a social issue and collect information about it to prepare an oral presentation.

2. Provide each student a copy of the student handout, "Making an Oral Presentation" and ask students to prepare for their presentation using it as a guide. Encourage students to use a visual aid such as a chart, photographs, an OHP or power point. Remind students of the time for each presentation and that they should be prepared for a short question-answer session.

3. Encourage each pair to rehearse the presentation on their own or present it to their friends and get constructive feedback to improve: content, structure, time, clarity and audibility of voice and use of visual aids.

4. Have each pair make their oral presentations to the class. Encourage the audience (students) to listen to the presentations attentively. Provide each student a copy of the student handout "Peer Evaluation of Oral Presentations" and ask them to evaluate the presentations of their fellow students, using the handout. Use the Teacher Resource "Evaluation of Oral Presentation" to evaluate the presentations and provide constructive feedback to each pair.
MAKING AN ORAL PRESENTATION

1. Preparing an oral presentation
   - Select a topic
   - Identify the objectives
   - Carry out research
   - Make an outline, review it add important and remove irrelevant information
   - Make notes on the cards of important points to cover (These should serve as reminders only and are not to be read)
   - Plan an effective and interesting opening

2. Practice:
   - Speak clearly and distinctly
   - Time the length of the report
   - Make sure you are audible
   - Vary your voice, avoid monotonous pattern
   - Speak slowly rather than quickly, pausing occasionally
   - Practice in front of those who can give constructive feedback

3. Delivery of the presentation:
   - Look at the audience (establish eye contact)
   - Start slowly
   - Aim voice at someone at the back of the room
   - Be enthusiastic and confident as this helps to keep the attention of the audience.

<table>
<thead>
<tr>
<th>Put a (✓) in the column when students demonstrate the Skills</th>
<th>Students name</th>
<th>Students name</th>
<th>Students name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction was short, clear and interesting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Topic was clearly explained</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used relevant information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used facts and examples to support claims</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spoke clearly and distinctly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was confident throughout the presentation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintained eye contact with the audience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used visual aids (charts, OHP, slides) effectively</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Handled questions and comments properly</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: this can be adapted as

- "Agree/disagree/Don't Know" for peer evaluation. Description and points for criteria 1-9 analytic format.

NOTE: The next two sections, observation and self-assessment are particularly useful in performance-based assessment.

4.14 Assessing Affective Traits and Dispositions

Attitudes, values, motivation, social relationships, classroom environment, concept of one's own academic ability - these are affective traits and dispositions.
They are those factors (of the student, teacher, and classroom) that AFFECT the way students learn.

(NOTE: All teachers know that students with positive affective traits learn better, are more confident, and enjoy learning. But few, if any, teachers assess affective targets. Reasons include the subject matter knowledge and skills - are seen as the primary focus education in school; the difficulty of defining affective targets because they are private and different for individual students; assessment is influenced by transient moods especially for younger students; students take self-reporting lightly or take results to please teachers).

**Why do it?**

Positive, well-developed affective traits motivate students to learn effectively now and in the long-term. Students have a better self-concept, higher productivity and become more involved citizens of their society. In addition, they learn and analyse themselves and refine behaviours and disposition.

**How to do it?**

Once students are assured anonymity, affective traits can be assessed through self-reporting, teacher observation and peer evaluation.

**Observation**

Observation is watching, listening and recording what a student says and/or does. Planned observation focuses on specific behaviour(s). It can be done as a spectator or as a participant. **Observational tools include:**

**Anecdotal Tools**

Anecdotal tool are ways of recording descriptions of what the student says and does. Anecdotal recording may be done as a spectator or as a participant. Three anecdotal tools frequently used by teacher are:

- **At-A-Glance:** Very brief anecdotal jottings made on each student on a regular basis (e.g., weekly)

**At-A-Glance Sheet.**

This tool is especially useful for doing a regular observational "scan" of all your students. It provides a format for recording very brief anecdotal observations on each student, and it allows you to see "at-a-glance" which of your students have not yet been observed.
You should try for weekly observation of each student. An at-a-glance approach can be used for recording either planned or incidental observations. If you are using this as a new approach, start small! Target only a few students, and limit the number of behaviours you observe.

**Checklist**

A listing of pre-selected behaviours / skills. After observing, the teacher checks off whether each item listed was shown or not shown.

**Rating Scale**

Like the checklist, a listing of pre-selected behaviour/skills. However, after observing, the teacher makes a decision about the degree or frequency with which each listed item was shown.

- **Checklist** same at in performance-based assessment (scoring rubrics), except
- **Rating scale** pre-selected behaviours to be observed are assessed, instead of performance criteria.

**Strengths and Weaknesses**

- Requires background knowledge of individual students
- Cannot gauge all behaviours for all students through just one observation - time must be invested
- Especially useful for assessing young children, students needing special attention and in performance-based tasks (process).
- Done as a continuous process, gives deeper understanding into students' growth (or lack of it)
- Gives specific examples of actual, spontaneous behaviour
- Difficult to stay objective
- Anecdotal recording usually unstructured, unsystematic - especially if behaviours not prep-selected.
- Tendency to emphasize negative behaviour
- Helpful in planning and reporting instruction and outcomes.

**Hints** for better Observation (Teachers should be able to answer 'yes' to each checklist question).

- Is observation appropriate to assess the behaviours specified?
- Are the behaviours to be focused on easily observable, clearly specified, and appropriate (considering students’ age, background and grade)?
- Are the number of behaviours and students, to be observed manageable?
- Are unusual, positive and negative, absent behaviours also noted?
- Have all students been observed at some point?
- Has each student been observed at different times in different situations (so that exceptional behaviour is not generalized)?
- Is the tool for observation (anecdotal, rating scale, checklist) appropriate for the specified behaviours?
Section - 5

References


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Education Curriculum Grade IX-X

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