

Curriculum of

EDUCATION

For Sindh

Grades IX–XII 2024



GOVERNMENT OF SINDH
SCHOOL EDUCATION & LITERACY DEPARTMENT
DIRECTORATE OF CURRICULUM, ASSESSMENT & RESEARCH SINDH JAMSHORO

PREAMBLE

In the pursuance of National Curriculum of Pakistan 2022-23, the Curriculum Wing of the Federal Ministry of Education has begun a process of curriculum reform to improve the quality of education through curriculum revision and textbook development in Pakistan. In this regard, the Government of Sindh took initiative through its different concerned departments especially the Directorate of Curriculum, Assessment, and Research (DCAR), Jamshoro to develop the curriculum of Education subject for classes XI – XII. This is the first effort of its nature to develop this subject curriculum in the history of education in Sindh, Pakistan.

Education as an optional subject for the classes of XI and XII will enable the students to explore the basics of education, its foundations, curriculum, its implementation through teaching and learning, assessment and evaluation for the maximum benefit of the society. Education subject and field provide the opportunities to its learners to understand the meaning, value, and purposes of life to upgrade their selves and others through developing different insights, and capacities for moral, character, and spiritual development for quality life and personal autonomy, and freedom.

This curriculum focuses the introduction of education, student and teacher, school organization, foundations of education, its curriculum, teaching and learning processes, learning environment, learning theories, their assessment and evaluation, current trends and issues in education. Through teaching these Sub domain(s) students will learn and enhance their qualities to make their life meaningful in the different directions i.e., social, cultural, economic, and political contexts across their life, context, provincial, national and international levels.

Noor Ahmed Khoso
Director

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CHAPTER # 01: Introduction

Education is a vital tool to shape individuals, communities, and economies to get maximum benefits for quality of life. Education serves as a platform for developing essential knowledge, skills, understanding of complex concepts, and nurturing personal and social growth and development with special reference to Sustainable Development Goals (SDGs). The importance of education has been universally acknowledged as it fosters the critical thinking, cultural understanding, innovation, and invention that provide opportunities to all people to contribute physically, mentally, intellectually, and meaningfully to the sustainability of the global village. However, education itself is not a fixed entity, but it is a dynamic field that has evolved significantly over the time of centuries influenced by various factors i.e., changing of environments, mental capacities, technological advancement, cultural shifts, thinking processes and directions, and socio-economic conditions.

Historically, education was primarily accessible to the children of elite class with special focus on imparting religious, philosophical, and mathematical knowledge and skills. With the rise of the industrial revolution, the need for formal, organized education became apparent to equip people with the necessary knowledge, skills, and disposition for a rapidly changing world. Thus, governments began establishing public education systems, making education accessible to a broader population of their countries. In the 20th century, education systems around the world expanded, and schools, colleges, and universities adapted curricula to include not only traditional subjects like math, science, and literature but also technical and vocational training. This change reflected the needs of growing economies that required skilled labor in various fields and disciplines. As the 21st century progressed, digital technologies began transforming the educational landscape, making online learning, personalized education, and access to vast amounts of information possible. Education has evolved from rote memorization and standardized testing to emphasizing critical thinking, creativity, and problem-solving, which can be done properly and authentically through scientific system of education, supported by the qualified teachers.

Education can be broadly categorized into three types i.e., formal, informal, and non-formal. Where, formal education is the structured education system that is provided in schools, colleges, and universities. It is systematic and follows a specific curriculum. While informal education refers to learning that takes place outside formal settings i.e., through life experiences, family interactions, social media, etc., which is more flexible and often unconsciously acquired. Non-formal Education is the type that includes organized learning outside the formal system, like vocational training, adult education, online courses, etc., which are often designed to meet specific needs and goals. Each type of education serves a unique purpose and complements the others in creating a holistic learning experience.



Education is not just a fundamental human right, but it is a cornerstone of progress, growth, and development. The impact of a good education is far-reaching, influencing not only the individual but also society at large. However, education systems must continue to adapt and address existing challenges to ensure that all individuals have the opportunity to learn, grow, and contribute to the world, which can be done through a team of qualified teachers in any organization. For that this curriculum is designed to attract and inspire people to acquire the subject and then field of education to become inspiring teachers in their future. Because the path forward for education is promising but complex. It requires a collaborative effort between governments, educational institutions, communities, and individuals to create inclusive, competent, and high-quality education systems to meet the needs of an evolving world. By addressing these challenges and embracing innovation, education can continue to be a powerful tool for creating a brighter and more equitable future for all stakeholders to have a bright future.



OBJECTIVES OF THE CURRICULUM

1. To understand the basics, importance, and scope of education.
2. To understand the processes of education.
3. To understand the foundational principles of education.
4. To explore the role of education in the growth and development of individuals, communities, and society.
5. To develop the knowledge, skills and disposition of the students for effective teaching and learning processes in their daily routines.
6. To analyze the relationship between education, curriculum, teaching, learning, and its impact on individuals, communities, society, and culture.
7. To understand and apply the learning theories to understand a child, its growth and development.



CHAPTER # 02: Progression Grid

Domain A: Education

Standard 1: Development of an understanding of the term, phenomenon, process, system, and product of education.	
Grade XI	Grade XII
Benchmark-I: Define and describe the term education, its importance, purpose, aims, elements, modes, types, and functions of education.	Benchmark-II: Recognize and classify the different points of views about education, its feature, principles, values, and processes.
Student Learning Outcomes (SLOs)	
[SLO: E-XI-A-01]: Define the term education, and its importance.	[SLO: E-XII-A-01]: Define the term of education in the different perspectives of the various educationists.
[SLO: E-XI-A-02]: Describe the aims and objectives of education.	[SLO: E-XII-A-02]: Describe the features and the principles of education.
[SLO: E-XI-A-03]: Discuss the purposes and scope of Education, and schooling.	[SLO: E-XII-A-03]: Discuss the role of education as a discipline, subject and teacher.
[SLO: E-XI-A-04]: Explain the elements, modes, and types of education.	[SLO: E-XII-A-04]: Explain the values of education in the life of the different stakeholders.
[SLO: E-XI-A-05]: Demonstrate the functions of education to enable the different stakeholders to be smart people of society.	[SLO: E-XII-A-05]: Demonstrate the steps of education as process and product to enable the different stakeholders to be smart people of society.
Standard 2: Development of an understanding of students and teachers as a whole with their role in the system of education.	
Grade XI	Grade XII
Benchmark-I: Define and describe the term student, its central position in seeking education, rights, duties and utility in society.	Benchmark-II: Recognize and classify the teacher, educator and teacher-educator different points of view about teacher and its role and responsibilities.
Student Learning Outcomes (SLOs)	
[SLO: E-XI-A-06]: Define the term student, its importance, rights, duties and responsibilities.	[SLO: E-XII-A-06]: Define the term teacher, its importance, in the different societies and cultures of the world.



Grade XI	Grade XII
<p>[SLO: E-XI-A-07]: Describe the latest slogan of Students as the Customer in the modern education system of 21st Century.</p>	<p>[SLO: E-XI-A-07]: Describe the differences between teacher, educator, and teacher educator on the basis of their roles, and qualifications.</p>
<p>[SLO: E-XI-A-08]: Discuss the purposes and scope of Student-centered education system.</p>	<p>[SLO: E-XII-A-08]: Discuss the status, rights, duties, and responsibilities of teacher in any society and culture.</p>
<p>[SLO: E-XI-A-09]: Explain the student engagement, their performance, and relationships with different stakeholders inside and outside of the school.</p>	<p>[SLO: E-XII-A-09]: Explain the roles of a teacher in any educational institution to be an inspiring teacher and role model for students.</p>
<p>[SLO: E-XI-A-10]: Demonstrate the functions, duties and responsibilities of Students as Future citizen.</p>	<p>[SLO: E- XII-A-10]: Demonstrate the teacher-student relationship as a support for problem solving procedures.</p>



Domain B: Foundation of Education

Standard 3: Development of an understanding of the school and school as an organization.	
Grade XI	Grade XII
Benchmark-I: Define and describe the term school, organization, and school organization, its importance, culture, environment, components, finances, and functions of education.	Benchmark-II: Explain and classify the different points of views about school, organization, and school organization, its staff, their duties and responsibilities, and systems of supervision and governance.
Student Learning Outcomes (SLOs)	
[SLO: E-XI-B-01]: Define the term school, organization, and school organization, its importance, scope.	[SLO: E-XII-B-01]: Define the term school organization in the different perspectives of scholars, societies, and cultures of the world.
[SLO: E-XI-B-02]: Describe the school as an organization, its organizational culture and environment.	[SLO: E-XII-B-02]: Describe the School personnel(s), its types, and the purposes of the appointments.
[SLO: E-XI-B-03]: Discuss the purposes and scope of School building, its components, designs, and shapes.	[SLO: E-XII-B-03]: Discuss the status, rights, duties, and responsibilities of teaching staff.
[SLO: E-XI-B-04]: Explain the School Finances, its relationships with different activities, and performance.	[SLO: E-XII-B-04]: Discuss the status, rights, duties, and responsibilities of Non-Teaching Staff i.e., Administrative, and Supporting staff.
[SLO: E-XI-B-05]: Demonstrate the functions of school to make the school as social organization and institution to work for the betterment of the society.	[SLO: E-XII-B-05]: Explain the educational supervision and governance system(s) at educational institutions and school organizations.
	[SLO: E-XII-B-06]: Explain and demonstrate the school discipline at educational institutions and school organizations
Standard 4: Development of an understanding about the foundations of education.	
Grade XI	Grade XII
Benchmark-I: Define and describe the term school, organization, and school organization, its importance, culture, environment, components, finances, and functions of education.	Benchmark-II: Explain and classify the different points of views about school, organization, and school organization, its staff, their duties and responsibilities, and systems of supervision and governance.



Grade XI	Grade XII
Student Learning Outcomes (SLOs)	
[SLO: E- XI-B-06]: Define the term Foundations of Education, its importance, purpose, aims, and functions to understand the system(s) of education.	[SLO: E- XII-B-07]: Define the term Foundations of Education, its importance, and purpose, in the different perspectives of scholars belonging to different school of thoughts, societies and cultures of the world.
[SLO: E- XI-B-07]: Describe and discuss the Ideological Foundation of education, its importance, purpose, aims, and functions.	[SLO: E- XII-B-08]: Describe and discuss the Economic Foundation of education, its importance, purpose, aims, and functions.
[SLO: E- XI-B-08]: Describe and discuss the Philosophical Foundations of education, its importance, purpose, aims, and functions.	[SLO: E- XII-B-09]: Describe and discuss the Sociological Foundation of education, its importance, purpose, aims, and functions.
[SLO: E- XI-B-09]: Describe and discuss the Psychological Foundations of education, its importance, purpose, aims, and functions.	[SLO: E- XII-B-10]: Describe and discuss the Cultural Foundation of education, its importance, purpose, aims, and functions.
	[SLO: E- XII-B-11]: Describe and discuss the Historical Foundation of education, its importance, purpose, aims, and functions.



Domain C: Curriculum

Standard 5: Development of an understanding of the curriculum, its scope, process, types, and implementation.	
Grade XI	Grade XII
<p>Benchmark-I: Define and describe the term teaching, its importance, types, purpose, styles, scope, methods, and attributes.</p>	<p>Benchmark-II: Recognize and classify the different points of view about learning, its types, styles, attributes, process, and influence or outcome.</p>
Student Learning Outcomes (SLOs)	
<p>[SLO: E-XI-C-01]: Define the term curriculum, its need, importance, and bases.</p>	<p>[SLO: E-XII-C-01]: Define the term curriculum in the perspectives of different experts belonging to the different societies and cultures of the world.</p>
<p>[SLO: E-XI-C-02]: Describe the aims and objectives of curriculum.</p>	<p>[SLO: E-XII-C-02]: Describe the different patterns and types of curricula.</p>
<p>[SLO: E-XI-C-03]: Discuss the nature, purposes, and scope of curriculum.</p>	<p>[SLO: E-XII-C-03]: Discuss the elements and designs of curriculum.</p>
<p>[SLO: E-XI-C-04]: Explain the difference between curriculum and syllabus.</p>	<p>[SLO: E-XII-C-04]: Explain the process of curriculum implementation and evaluation.</p>
<p>[SLO: E-XI-C-05]: Demonstrate the curricular and co-curricular activities.</p>	<p>[SLO: E-XII-C-05]: Demonstrate the implications of curriculum.</p>



Domain D: Teaching and Learning

Standard 6: Development of an understanding of the teaching and learning, its scope, process, types, and implementation.	
Grade XI	Grade XII
Benchmark-I: Define and describe the term teaching, its importance, types, purpose, styles, scope, methods, and attributes.	Benchmark-II: Recognize and classify the different points of view about learning, its types, styles, attributes, process, and influence or outcome.
Student Learning Outcomes (SLOs)	
[SLO: E-XI-C-01]: Define the term teaching and mentoring, its need, and importance.	[SLO: E-XII-C-01]: Define the term Learning in the perspectives of different experts belonging to the different societies and cultures of the world.
[SLO: E-XI-C-02]: Describe the aims, and objectives, types, and styles of teaching.	[SLO: E-XII-C-02]: Describe the types, styles, and attributes of learning or learner to support the learning process.
[SLO: E-XI-C-03]: Discuss the attributes of teaching or teacher as role models for their students, and society.	[SLO: E-XII-C-03]: Discuss the process and factors of learning influencing students to become reflective learners.
[SLO: E-XI-C-04]: Explain the differences between pedagogy and andragogy for active participation through using conceptual frameworks to support students' learning.	[SLO: E-XII-C-04]: Explain the process of using student-centered pedagogies and ICT effectively in their classrooms.
[SLO: E-XI-C-05]: Demonstrate the use of collaboration and ICT as tools to maintain strong working relations to support learning through implementation of teaching activities.	[SLO: E-XII-C-05]: Demonstrate the role and modes of motivation to improve students' learning.
Standard 7: Development of an understanding of the Learning Environment, its scope, process, types, factors, and characteristics.	
Grade XI	Grade XII
Benchmark-I: Define and describe the term learning environment, its importance, types, purpose, and characteristics.	Benchmark-II: Recognize and classify the different points of view about learning, its types, styles, attributes, process, and influence or outcome.
Student Learning Outcomes (SLOs)	
[SLO: E-XI-C-01]: Define the term teaching and mentoring, its need, and importance.	[SLO: E-XII-C-01]: Define the term Learning in the perspectives of different experts belonging to the different societies and cultures of the world.



Grade XI	Grade XII
[SLO: E-XI-C-02]: Describe the aims, and objectives, types, and styles of teaching.	[SLO: E-XII-C-02]: Describe the types, styles, and attributes of learning or learner to support the learning process.
[SLO: E-XI-C-03]: Discuss the attributes of teaching or teacher as role models for their students, and society.	[SLO: E-XII-C-03]: Discuss the process and factors of learning influencing students to become reflective learners.
[SLO: E-XI-C-04]: Explain the differences between pedagogy and andragogy for active participation through using conceptual frameworks to support students' learning.	[SLO: E-XII-C-04]: Explain the process of using student-centered pedagogies and ICT effectively in their classrooms.
[SLO: E-XI-C-05]: Demonstrate the use of collaboration and ICT as tools to maintain strong working relations to support learning through implementation of teaching activities.	[SLO: E-XII-C-05]: Demonstrate the role and modes of motivation to improve students' learning.
Standard 8: Development of an understanding of the learning theories, their importance, scope, process of usage, types, and characteristics.	
Grade XI	Grade XII
Benchmark-I: Define and describe the Learning theories, their importance, scope, process of usage, types, and characteristics	Benchmark-II: Recognize and classify the different points of views about learning theories, their types, process, and influence on outcomes
Student Learning Outcomes (SLOs)	
[SLO: E-XI-D-01]: Define the theory, and learning theories, their importance, need, and scope.	[SLO: E-XII- D-01]: Describe learning theories in the perspectives of different authors.
[SLO: E-XI- D-02]: Describe the aims, objectives, types, and characteristics of learning theories.	[SLO: E-XII- D-02]: Discuss and demonstrate constructivism learning theory, and its implications in classroom.
[SLO: E-XI- D-03]: Discuss and demonstrate the behaviorism learning theory, and its implications in classroom	[SLO: E-XII- D-03]: Discuss and demonstrate the humanism learning theory, and its implications in classroom
[SLO: E-XI- D-04]: Discuss and demonstrate the cognitivism learning theory, and its implications in classroom	[SLO: E-XII- D-04]: Discuss and demonstrate the connectivism learning theory, and its implications in classroom
[SLO: E-XI-D-05]: Discuss and demonstrate the constructivism learning theory, and its implications in classroom	[SLO: E-XII-D-05]: Compare and contrast the five fundamentals educational learning theories i.e., behaviorism, cognitive, constructivism, humanism, and connectivism.



Grade XI	Grade XII
	[SLO: E-XII-D-06]: Explain the process of implementation of learning theories in the classroom.



Domain E: Assessment and Evaluation

Standard 9: Development of an understanding of the assessment and evaluation to facilitate the students in learning process and outcomes.	
Grade XI	Grade XII
Benchmark-I: Define and describe the terms assessment and evaluation to support the learning process and outcomes achievement.	Benchmark-II: Recognize and classify the different point of views about assessment and evaluation to support the learning process and outcomes achievement.
Student Learning Outcomes (SLOs)	
[SLO: E-XI-E-01]: Define the terms assessment and evaluation, their importance, need, purpose, and scope.	[SLO: E-XII- E-01]: Elaborate the term assessment and evaluation in the perspectives of different experts.
[SLO: E-XI-E-02]: Describe the aims, objectives, and characteristics of assessment and evaluation.	[SLO: E-XII- E-02]: Discuss and differentiate the assessment for learning, as learning, and of learning.
[SLO: E-XI-E-03]: Discuss and differentiate assessment and Evaluation	[SLO: E-XII- E-03]: Discuss and explain the principles of assessment and evaluation.
[SLO: E-XI-E-04]: Discuss the types of assessment and evaluation	[SLO: E-XII- E-04]: Discuss and demonstrate the Assessment Tools and their Characteristics.
[SLO: E-XI-E-05]: Discuss the process of assessment and evaluation.	[SLO: E-XII- E-05]: Compare and contrast the formative and summative assessment and evaluation.



Domain F: Society and Education

Standard 10: Development of an understanding of the current trends and issues in education to facilitate the students to explore the real-life solutions.	
Grade XI	Grade XII
Benchmark-I: Define and describe the current trends and issues in education, their importance, scope and solution.	Benchmark-II: Recognize and classify the different point of views about current trends and issues in education to find the real-life solution.
Student Learning Outcomes (SLOs)	
[SLO: E-XI-F-01]: Define the current trends and issues in education, their importance, and scope.	[SLO: E-XII-F-01]: Define the current trends and issues in the perspectives of different authors.
[SLO: E-XI-F-02]: Describe aims and objectives to study the current trends and issues in education.	[SLO: E-XII-F-02]: Discuss the current trends and issues in education i.e., Education for All, and out of school children.
[SLO: E-XI-F-03]: Discuss the current trends and issues in education i.e., globalization, peace education.	[SLO: E-XII-F-03]: Discuss the current trends and issues in education i.e., population education, paedo-centric (child-centered) education, and quality education.
[SLO: E-XI-F-04]: Discuss current trends and issues in education i.e., corruption, political instability, hunger, poverty, and educational leadership and management.	[SLO: E-XII-F-04]: Discuss and demonstrate the current trends and issues in education i.e., STEM / STEAM education.
[SLO: E-XI-F-05]: Discuss the current trends and issues in education i.e., conflicts and their resolution in educational institutions.	[SLO: E-XII-F-05]: Elaborate the current trends and issues in education i.e., entrepreneurship education.
[SLO: E-XI-F-06]: Discuss current trends and issues in education i.e., diversity, and its impact on education.	[SLO: E-XII-F-06]: Discuss the current trends and issues in education i.e., inclusive education.
[SLO: E-XI-F-07]: Discuss current trends and issues in education i.e., Parental and community involvement.	[SLO: E-XII-F-07]: Discuss current trends and issues in education i.e., creation of harmony.
[SLO: E-XI-F-08]: Discuss current trends and issues in education i.e., culture and heritage.	[SLO: E-XII-F-08]: Discuss current trends and issues in education i.e., disaster management and climate change.



CHAPTER # 03: Content Distribution Matrix

Domain A: Education

Standard 1: Introduction of Education

Topics for XI	Topics for XII
<ul style="list-style-type: none"> • Definition(s) of Education • Importance of Education • Elements of Education • Modes of Education • Types of Education • Aims of Education • Functions of Education • Purpose and Scope of Education 	<ul style="list-style-type: none"> • Definition(s) of Education in perspectives of various educationists • Features of Education • Principles of Education • Education as a Discipline, and its Role as a subject and Teacher • Education and Values • Education as Process and Product

Standard 2: Student and Teacher

Topics for XI	Topics for XII
<ul style="list-style-type: none"> • Definition(s) of Student • Rights of Student • Duties and responsibilities of student Students as a Customer • Student-centered education • Student engagement • Students' performance • Student-teacher Relations • Students as a Future citizen 	<ul style="list-style-type: none"> • Definition(s) of Teacher • Qualification(s) of a teacher • Difference between Teacher, Educator, and Teacher Educator • Rights and Status of Teacher • Duties and responsibilities of Teacher • Roles of a Teacher in educational institution • Inspiring Teachers • Teacher-student relation



Domain B: Modes and Foundation of Education

Standard 3: School Organization (10%)

Topics for XI	Topics for XII
<ul style="list-style-type: none">• Definition(s) of School, organization, and school organization• School as an Organization and its organizational culture and environment• School building and its components• Designs of school buildings• Components of school building• School Finances• Functions of School	<ul style="list-style-type: none">• Definition(s) of School organization• School personnel• Duties and responsibilities of Administrative Staff• Duties and responsibilities of Teaching Staff• Duties and responsibilities of Non-Teaching Staff• Educational Supervision and Governance• School Discipline

Standard 4: Foundation of Education

Topics for XI	Topics for XII
<ul style="list-style-type: none">• Definition(s) of Foundations of Education• Ideological Foundation• Philosophical Foundation• Psychological Foundation	<ul style="list-style-type: none">• Definition(s) of Foundations of Education• Economic Foundation• Sociological Foundation• Cultural Foundation• Historical Foundation



Domain C: Curriculum

Standard 5: Introduction of Curriculum (10%)

Topics for XI	Topics for XII
<ul style="list-style-type: none">• Definition(s) of Curriculum• Bases of curriculum• Aims and objectives of Curriculum• Scope of Curriculum• Nature of Curriculum• Need and Importance of Curriculum• Difference between Curriculum and Syllabus• Curricular, Co-Curricular and Extracurricular Activities	<ul style="list-style-type: none">• Definition(s) of Curriculum in the perspectives of different experts• Patterns of Curriculum• Types of Curriculums• Elements of Curriculum• Designs of Curriculum• Curriculum Evaluation• Implications of Curriculum



Domain D: Teaching and Learning

Standard 6: Teaching and Learning (10%)

Topics for XI	Topics for XII
<ul style="list-style-type: none"> • Definition(s) of Teaching and Mentoring • Types and Styles of Teaching • Attributes of Teaching or Teacher • Teachers as role models • Using modern Pedagogy and Andragogy for active participation • Using conceptual frameworks to support learning • Collaboration as a tool to maintain strong working relations to support learning • Using information & communications technology (ICT) in the classroom 	<ul style="list-style-type: none"> • Definition(s) of Learning • Types and Styles of Learning • Attributes of Learning or Learner • Process of Learning • Factors influencing Learning • Becoming a reflective Learner • Use of Student-centered Pedagogy or Andragogy • Using information & communications technology (ICT) in the classroom • Role and Methods to improve students motivation for learning

Standard 7: Learning Environment

Topics for XI	Topics for XII
<ul style="list-style-type: none"> • Definition(s) of Learning Environment • Characteristics of Learning Environment • Types of Learning Environment • School environment as a Disciplinary climate • Characteristics of learning environments • Factors effecting school climate • Teachers' stimulation on students' active engagement 	<ul style="list-style-type: none"> • Definition(s) of Learning Environment • Creating learning environments • Connecting pedagogy and design • Role of Principal Leadership • Relationship between effective learning environment, learning styles, and classroom teaching • Creating a 21st Century Learning Environment



CHAPTER # 04: Guidelines for Resource Development

GUIDELINES FOR RESOURCE DEVELOPMENT

Guidelines for authors

Guidelines to Textbook Authors Textbooks aimed at lower levels tend to be inclined more towards learning features than those at higher levels. However, in textbooks writing generally the following aspects may be taken into considerations.

- The textbook should be in line with the weightage, of the topics, areas of curriculum and Students Learning Outcome (SLO) of the Reviewed curriculum.
- The authors should continuously focus on the standards and benchmarks and Students Learning Outcome (SLO).
- The author must bring himself to mental level of the students he/she is writing for.
- The span of the textbook be fairly reasonable. Use previous concepts and extend for the higher one.
- The material be cramped to make it more digestible; it may be chunked into smaller parts with headings.
- The textbook must provide accurate and up-to-date information.
- The text material be arranged in a logical manner i.e. simple to complex, familiar to unfamiliar and concrete to abstract.
- The text material must be free from ambiguities and errors (both conceptual and typographical).
- The content provided in the textbook should not develop wrong and confusing concepts.
- The text be clear and concise. It may not convey any meaning other than the one intended in the curriculum SLO.
- Footnotes and side notes may be inserted whenever necessary, and website related to the topic be highlighted for further studies.
- A simple and brief assessment be given on the previous work related to the topic in order to maintain continuity.
- List of symbols and index be given at the end of the book to facilitate the students and the teachers.
- The authors should go through relevant curriculum and the guidelines to the authors before developing the textbooks.
- Objective type, multiple choice questions (MCQs), constructed response questions (CRQs), extended response questions (ERQs) may be given at the end of every chapter.



Guidelines for the Teachers' Manual

Ideally the teachers' manual should come with the textbook. The manual is aimed at informing teachers how the textbook is written and how best to use it to facilitate student learning. It can be seen as a means of helping teachers to develop professionally. It should provide detailed explanation of key concepts and the way to teach a particular topic. Its basic features are as below;

The teachers' manual should

- Be easy to understand and use.
- Help teachers develop instructional material, strategies, teach the text in class and extend activities.
- Given sequenced instructions for each activity.
- Include teaching learning resources and identify the sources.
- Establish a question bank (having questions different from text) and suggest interactive quizzes corresponding to each unit.
- Involve variety of updated and relevant teaching strategies and rationale for their use.
- Explain how to implement each teaching strategy.
- Identify constraints and strength of each strategy or activity.
- Identify resources needed for teaching strategies and extension of activities.
- Expand and develop teachers' rationale of knowledge and skills.
- Identify assessment strategies.
- Orientation of authors and reviewers be arranged for better cohesion.

General Guidelines to Textbook Board

- Orientation sessions/workshops may be arranged for respective teachers to apprise them of the curriculum and relevant textbook.
- The Textbook Boards must ensure that the relevance of the curriculum and textbooks is maintained, the language should be simple, and the material be students' friendly.
- The Textbook Boards should arrange the orientation sessions for authors and reviewers for better understanding of the curriculum.
- The reviews of the textbooks be periodically conducted by senior and more qualified teachers and published for improvement of the textbooks.



CHAPTER # 05: Assessment and Instructional Strategies

Units for XI & XII and its overall weightage in percentage (%)

Domain(s)	Sub Domain(s)	Weightage %
A. Education	Introduction of Education	10%
	Student and Teacher	10%
B. Foundations of Education	School Organization	10%
	Foundations of Education	10%
C. Curriculum	Introduction to Curriculum	10%
D. Teaching and Learning	Teaching and Learning	10%
	Learning Environment	10%
	Learning Theories	10%
E. Assessment and Evaluation	Introduction to Assessment	10%
F. Society and Education	Current Trends and Issues in Education	10%



Suggested Scheme of Assessment for Annual Examination XI -XII

Item	Per	Marks	No. of Items Questions
MCQs	20%	20	20
CRQs	40%	40	08 - 10
ERQs	40%	40	04 - 05

Suggested Instructional Strategies

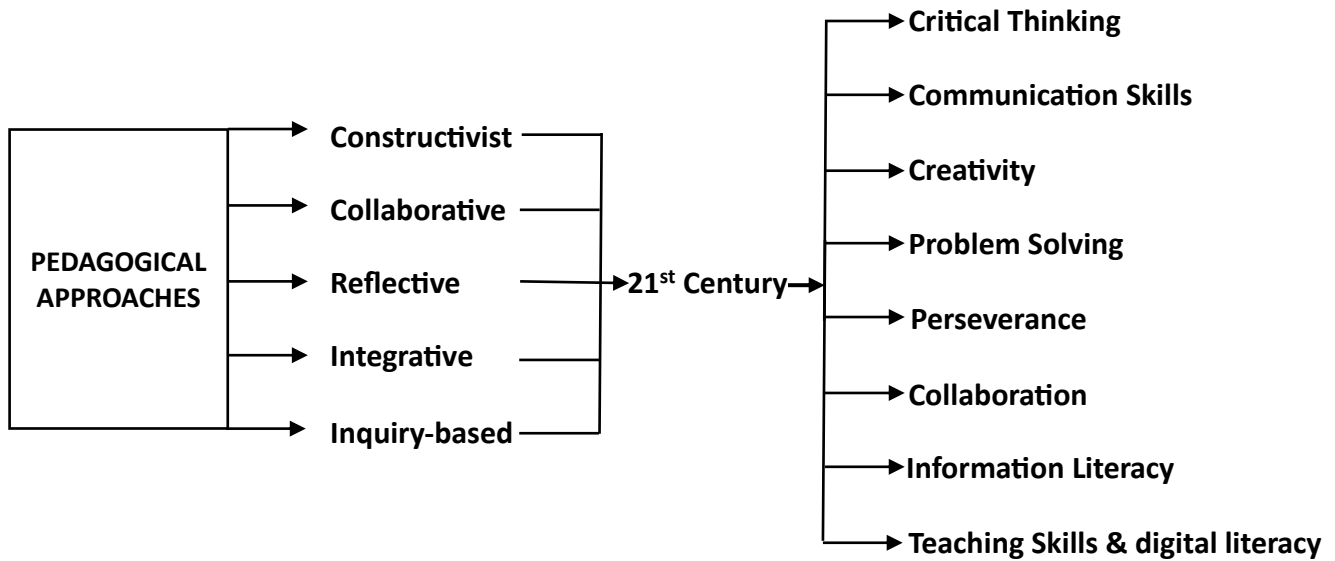
1. Crossover Learning (Learning in Informed Setting)
2. Learning through Argumentation (Argumentation)
3. Incidental Learning (Unplanned on Un-intentional learning)
4. Context-Based Learning (Learn from context or experience)
5. Computational Thinking (Thinking and Problem Solving)
6. Learning by Doing (Engaging with scientific tools and practices)
7. Embodied Learning (Interacting with a real or simulated world)
8. Adoptive Teaching (Same Educational Presentations and materials for all)
9. Analytics of Emotions (Automated methods of Eye-Tracking and Facial recognition)

Stealth Assessment (Automatic data collection to borrow techniques from online and role-playing)



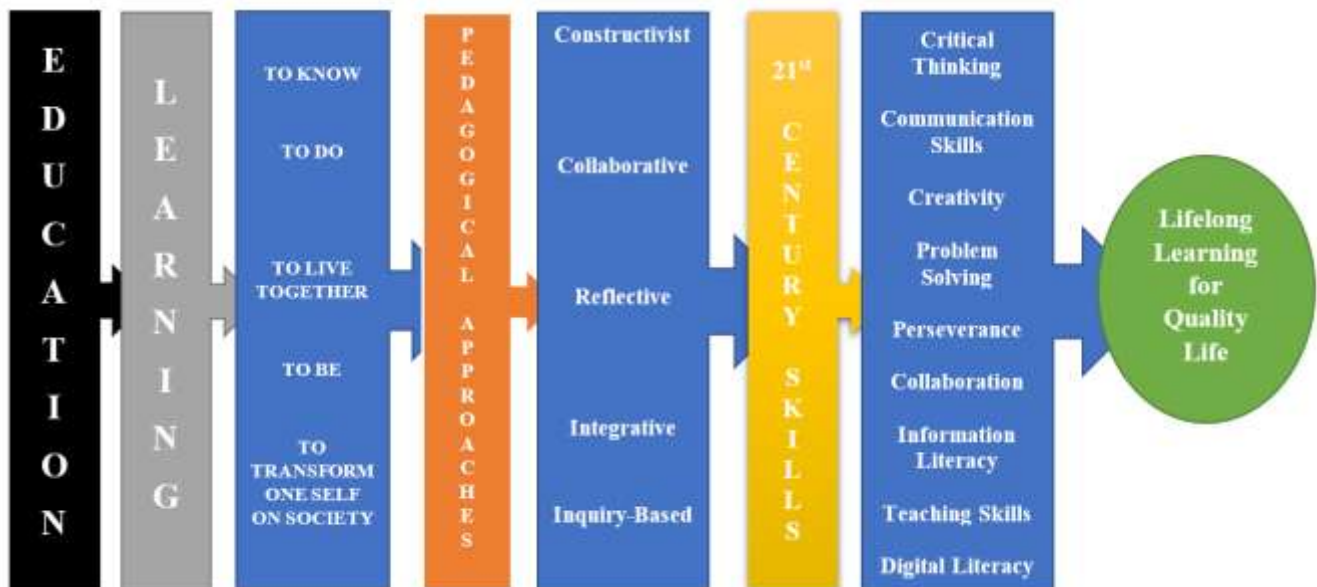
5Cs of Teaching (21st Century skills)

- C1- Critical Thinking
- C2- Creativity
- C3- Communication
- C4- Collaboration and Leadership
- C5- Character building



Modern Approaches

- E-Learning
- Blended Learning
- Gamification
- Adoptive Learning
- Micro-learning
- MOOCs
- Network learning





Units for XI & XII and its overall weightage in percentage (%)

Domain(s)	Sub Domain(s)	Weightage
A. Education	Introduction of Education	10%
	Student and Teacher	10%
B. Foundations of Education	School Organization	10%
	Foundations of Education	10%
C. Curriculum	Introduction to Curriculum	10%
D. Teaching and Learning	Teaching and Learning	10%
	Learning Environment	10%
	Learning Theories	10%
E. Assessment and Evaluation	Introduction to Assessment	10%
F. Society and Education	Current Trends and Issues in Education	10%

Weightage Table for Paper Setter for Final Examination

S.#	Items	Marks	Percentage %	Range of Number of Items	Details
01	MCQs	20	20	20 to 40	For 20 MCQs each MCQ carries one mark Or For 40 MCQs each MCQ carries half mark
02	CRQs	40	40	08 to 10	For 08 CRQs each CRQ carries five marks Or For 10 CRQs each CRQ carries four marks
03	ERQs	40	40	04 to 05	For 04 ERQs each ERQ carries ten marks Or For 05 ERQs each ERQ carries eight marks

*The time management may be checked by the paper setter as per need and requirement of the question(s) in all categories.



Definition of the Terms

Term	Definition
Education	Education is a subject taught to students to motivate them to be future teacher.
Student	Student is a person who gets education in schools, colleges, and universities.
Student-teacher	Student-teacher is a person who gets education in the departments, or colleges of education.
Prospective teacher	Prospective-teacher is a person who gets education in the departments, or colleges of education and want to be a teacher in future.
Teacher	Teacher is a person who teaches in schools, colleges, and universities.
Teacher-Educator	Teacher-educator is a person who teaches in the departments, or colleges of education.



List of Abbreviations

Abbreviation	Details
ICT	Information and Communications Technology
STEM	Science, Technology, Engineering, and Mathematics
STEAM	Science, Technology, Engineering, Art and Mathematics



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