KNOWLEDGE AND CURRICULUM

COURSE CODE: BD4KC

UNIT –III

CURRICULUM DESIGN AND ORGANIZATION OF KNOWLEDGE

MEANING AND DEFINITIONS OF CURRICULUM DESIGN

Meaning

- Curriculum design involves creating a course blueprint, aligning content with learning objectives, and developing a course outline, assessments, and interactive activities to achieve those objectives.

Definition

- **Alexander (1954, p. 245),** defined curriculum design as "...the pattern or framework or structural organization used in selecting, planning and carrying forward educational experiences in the school.

CURRICULUM DESIGN AND DEVELOPMENT

Importance of Curriculum Development

- Enables effective transaction of learning experiences to learners
- Provides a thorough understanding of the theoretical background
- Prepares teachers for potential involvement in curriculum review, update, and redesign

The Role of Teachers in Curriculum Development

- "Teachers as Agents of Change"
- "As teachers, we play a crucial role in the transaction of learning experiences to learners.
- Understanding the process of curriculum development is essential to fulfill this role effectively."

STEPS OR COMPONENTS FOR CURRICULUM DESIGNING

Ralph Tyler's 4-Step Curriculum Design Framework (1949)

1. **Objectives:** Define learning goals
2. **Content:** Determine subject matter
3. **Learning Experiences:** Plan activities and exercises
4. **Evaluation:** Assess student learning

Tyler's Curriculum Design Rationale 4 Key Questions to Answer:

- What educational purposes should the school seek to attain?
- How can learning experiences be selected which are likely to be useful Curriculum Designing in attaining these purposes?
- How can learning experiences be organized for effective instruction?
- How can the effectiveness of learning experiences be evaluated?
- The planning of the curriculum takes place at many levels.

SOURCES OF CURRICULUM DESIGN

1. Educational Theories and Philosophies

- Educational theories and philosophies are a foundational source of curriculum design.
- These frameworks provide guiding principles for what education should achieve and how it should be delivered.
- Progressivism, rooted in John Dewey's ideas, emphasizes experiential learning and critical thinking.
- Constructivism, influenced by Jean Piaget and Lev Vygotsky, focuses on learners constructing their own understanding through environmental interaction.
- Behaviorism, associated with B.F. Skinner, involves conditioning and reinforcement to shape behavior.

SOURCES OF CURRICULUM DESIGN

2. Subject Matter in Curriculum Design

- The core knowledge and skills within a discipline are a critical source of curriculum design.
- Subject matter experts and advancements in specific fields ensure the curriculum is accurate, relevant, and up-to-date.
- This approach provides students with a solid foundation in essential areas of knowledge.
- This foundation prepares students for higher education or professional careers.

SOURCES OF CURRICULUM DESIGN

3. Learner Characteristics in Curriculum Design

- This includes considering developmental stages, learning styles, and individual interests and needs.
- A curriculum aligned with students' cognitive, emotional, and social development can enhance engagement and learning outcomes.
- Recognizing diverse learning styles, such as visual, auditory, or kinesthetic, allows educators to design lessons that cater to various ways students process information.
- Incorporating students' interests and future goals personalizes the learning experience.

SOURCES OF CURRICULUM DESIGN

4. Educational Standards and Policies

- National and state standards, accreditation requirements, and curriculum frameworks are essential sources of curriculum design.
- These standards and policies ensure consistency, equity, and quality across educational institutions.
- They provide benchmarks for what students should know and be able to do at various stages of their education.
- Adhering to these guidelines helps maintain high educational standards.
- Additionally, they facilitate the comparability of educational outcomes across different contexts.

SOURCES OF CURRICULUM DESIGN

4. Research and Data

- Educational research and data analytics significantly inform curriculum design.
- Findings from studies on teaching methods, learning outcomes, and educational psychology provide evidence-based insights to enhance curriculum effectiveness.
- Data from assessments and feedback mechanisms help identify areas of strength and weakness in the curriculum.
- This data guides curriculum adjustments to better meet student needs.

SOURCES OF CURRICULUM DESIGN

5. Research and Data

- Engaging with the community and stakeholders is crucial for designing a curriculum that reflects the values and needs of the society it serves.
- Input from parents, local businesses, and educational partnerships provides valuable perspectives on what is needed to support students' success.
- Collaborations with local industries can help align the curriculum with workforce demands.
- Feedback from parents ensures that the curriculum addresses the holistic development of students.

SOURCES OF CURRICULUM DESIGN

6. Assessment and Feedback

- Continuous assessment and feedback are essential for refining curriculum design.
- Standardized tests, formative assessments, and feedback from students and educators provide critical data on the curriculum's effectiveness.
- This ongoing evaluation helps ensure that the curriculum remains dynamic and responsive to changing educational needs and contexts.

CURRICULUM DESIGN DIMENSION

Several dimensions

Horizontal, Vertical scope, integration, sequence, articulation, balance and continuity.

1. Horizontal and Vertical Alignment

- Enhance the mutual relations of the curriculum and the instructions of the
- Educators are endowed with the audacity to analyze how student's meet set standards by specified tests.
- Joins the curricular objectives transversely between subjects.

2. Vertical alignment

- It helps to intensify of substance by imparting knowledge to teachers at different educational levels.
- Students are the primary beneficiaries

CURRICULUM DESIGN DIMENSION

3. Scope

- Educators need to address the breadth and depth of its content.
- Scope means not only the depth and range of content provided to students.
- The challenge of determining scope goes back to the basic question posed by Herbert Spencer, “What knowledge is of the most worth?”.

4. Integration

- It refers to the linking of all types of knowledge and experiences contained within the curriculum plan.
- It is essentially a design feature to bring into close relationship all the bits and pieces of the curriculum.
- Enable the student to comprehend knowledge as unified, rather than individualized.

CURRICULUM DESIGN DIMENSION

5. Sequence

- Curricularists face the challenge of effectively sequencing curricular elements to foster cumulative and continuous learning.
- To achieve this, they must determine how content and experiences will be presented and repeated to enable students to connect and deepen their understanding of the curriculum.
- A long-standing debate exists over whether the sequence of content and experiences should be based on the logic of the subject matter or on how individuals process knowledge.
- Three key sequence patterns to consider are simple to complex learning, whole to part learning, and chronological learning.

CURRICULUM DESIGN DIMENSION

6. Balance

- Curriculum designers aim to achieve balance by allocating appropriate weight to each aspect of the design to prevent distortions.
- Balance is a challenging concept in curriculum design because it requires reconciling the need for localization and individualization with the traditional approach of planning for the masses.
- Educational policies also exert an influence on the balance of the curriculum.
- Maintaining balance in the curriculum demands continuous fine-tuning and adjustments to ensure that all aspects are properly weighted.

CURRICULUM DESIGN DIMENSION

7. Continuity

- It refers to the vertical manipulation or repetition of curriculum components to ensure consistent development of skills and knowledge.
- For instance, if reading skills are a key objective, it is essential to provide recurring opportunities for students to practice and develop these skills over time.
- It involves reinforcing the same skills and concepts at increasingly higher levels of depth and breadth as students progress through their education.
- The concept of continuity is exemplified in Jerome Bruner's idea of the ‘spiral curriculum‘.

MEANING OF KNOWLEDGE ORGANIZATIONS

Concept

- In the context of curriculum design, "knowledge organization" refers to the process of structuring and arranging the content, skills, and concepts to be taught in a logical, coherent, and meaningful way.
- The notion of "knowledge organization" was reprised by Dahlberg in the 1970s: the German term Wissensordnung (knowledge ordering) was employed for referring to the conceptual and systematic organization of human knowledge **(Dahlberg 1974).**

It involves

- Categorization: Grouping related concepts, skills, and content into categories or units to create a logical structure.
- Classification: Assigning labels or tags to each category to create a hierarchical or taxonomic structure.
- Relationships: Identifying connections and relationships between different categories, concepts, and skills to create a web of knowledge.
- Sequencing: Determining the order in which the content and skills should be taught to facilitate learning and understanding.
- Integration: Combining different subjects, disciplines, or topics to create a cohesive and interdisciplinary curriculum.

MEANING OF KNOWLEDGE ORGANIZATION

The National Knowledge Commission (NKC)

- The National Knowledge Commission (NKC) was established by the Government of India on June 13, 2005.
- The Commission's primary objective, as stated by its chairman, Mr. Sam Pitroda, was to create a blueprint to leverage India's knowledge base to equip its citizens to tackle 21st-century challenges.
- The Commission identified five key areas for action: Access, Concepts, Creation, Application, and Service.

KNOWLEDGE ORGANIZATION

Functions of Knowledge organization

- "Build excellence in the educational system to meet the knowledge challenges of the 21st century and increase India's competitive advantage in fields of knowledge.
- Promote creation of knowledge in **science** and **technology laboratories**.
- a **Improve the management of institutions** engaged in **Intellectual Property Rights**.
- Promote knowledge applications in **agriculture** and **industry.**
- Promote the use of knowledge capabilities in making **movement** an effective, transparent and
- Accountable service provider to the citizen and promote widespread sharing of knowledge **to maximize public benefit**."

BASIS OF KNOWLEDGE ORGANIZATION

TRADITIONAL FORMS OF KNOWLEDGE

- Most of the current knowledge is derived from traditional forms of knowledge passed down from ancient civilizations such as ancient Greece, India, Mesopotamia, China, and Egypt.
- The interaction between these major civilizations led to a refined understanding of knowledge.
- There is a body of knowledge in areas like Medicine, Arithmetic, Agriculture, and more, found in both classical texts and folk traditions.
- Those familiar with Hindu mythology are aware of the significant role played by the Shastras and Lok Paramparas in shaping knowledge.
- **Example for traditional forms of knowledge**
  - Medicine
  - Folk tradition

BASIS OF KNOWLEDGE ORGANIZATION

Medicine

Traditional medicine is a ubiquitous phenomenon across societies, exemplified by India's ancient and enduring health traditions, such as Ayurvedic and Siddha, characterized by skilled practitioners and a rich theoretical foundation.

- Being able to take health care.
- Knowledge of common cures such as may be possessed by Vaidus, Nattu Vaidhyars, Bhagats.
- Traditional sayings and proverbs on health systems.
- Beliefs on such food as Pathya~n and Aput/zya~n. There are foods to be preferred or avoided during specific diseases or conditions
- There are also specialists for specific diseases such as asthma, rabies (Visha Cliikitsa) and impotence.
- Traditional birth attendants who perform delivery at home.

BASIS OF KNOWLEDGE ORGANIZATION

Folk traditions

- Folk traditions originate from the practices, customs, and stories of common people and are passed down orally, often with variations between individuals and periods.
- These traditions are more prevalent in rural areas with peasant cultures.
- A common characteristic of folk traditions is that they are accepted by the community, transmitted orally, and constantly evolving.
- Folk traditions are often aided by poetic devices such as rhymes and alliteration.
- Folk traditions serve as a means of transferring knowledge from one generation to the next.

BASIS OF KNOWLEDGE ORGANIZATION

TRADITIONA KNOWLEDGE

- Proverbial knowledge is a common phenomenon that transcends cultures and has been used across the ages.
- In West Africa, proverbs are considered essential to communication, likened to "the palm oil with which words are eaten".
- Proverbs have the power to convey complex ideas in a concise and intelligent manner, often more effectively than lengthy paragraphs.
- Proverbs often touch on various aspects of life, including food habits, treatment, and personal etiquette.

BASIS OF KNOWLEDGE ORGANIZATION

MODERN FORMS OF KNOWLEDGE

- It is incorrect to equate knowledge solely with the information contained in books or learned in schools.
- Teaching is not merely the transmission of knowledge from a source to the learner's brain.
- This view is flawed because it assumes the learner is a passive recipient of information, like an empty cup to be filled.
- In modern times, knowledge encompasses more than just the collection of information.
- Instead, knowledge refers to information that is organized in a structured way, making it easily accessible and locatable.

BASIS OF KNOWLEDGE ORGANIZATION

Key principles and practices

- Information Management
- Knowledge Creation and Acquisition
- Evaluation and Improvement
- Learning and Development
- Collaboration and Networking
- Innovation and Adaptability
- Ethics and Responsibility
- Knowledge Sharing and Dissemination

AGENCIES INVOLVED IN ORGANIZATION OF KNOWLEDGE IN SCHOOLS

Types of education

- Formal,
- Informal and
- Non-formal

Mode of Education

- Regular
- Open,
- Distance and
- Online educational organization
- Adult Education

Board of School Education

- CBSCE, ICSE

Types of educational institution

- Regular school
- Inclusive school
- Special school
- Home education
- Home based program, family community and

Government organization,

- Department of school education.
- D.TE.D
- SSA
- RMSA
- RUSA
- MHRD
- NCERT,
- SCERT,
- NCTE,