
UNIT 4 CURRICULUM AND PEDAGOGY*

Structure

- 4.1 Introduction
- 4.2 Objectives
- 4.3 Understanding the Meaning of Curriculum
- 4.4 Relationship between Curriculum and Pedagogy
 - 4.4.1 Pedagogical Considerations in Curriculum
- 4.5 Various Issues in Curriculum
 - 4.5.1 The National versus Local Curriculum
 - 4.5.2 Contextualization of Curriculum
 - 4.5.3 Relating Curriculum theory to Practice
 - 4.5.4 Integration of ICT in Curriculum
 - 4.5.5 Establishment of Standards for Curricular Research and Practice
- 4.6 Major Curriculum Frameworks
 - 4.6.1 Integrated Curriculum Framework
 - 4.6.2 National Curriculum Framework-2005
- 4.7 National Education Policy- 2020 and Pedagogy
- 4.8 Choice Based Credit System (CBCS)
 - 4.8.1 Conceptual Framework of CBCSS
 - 4.8.2 Meaning of the Key Concepts used in CBCSS (UGC)
- 4.9 Let Us Sum Up
- 4.10 Unit –End Activities
- 4.11 References and Suggested Readings
- 4.12 Answers to Check Your Progress

4.1 INTRODUCTION

Curricular debates have aroused much interest during contemporary period, particularly in the context of construction, transaction and outcomes of curriculums. At present, school and higher education curriculums are getting immense focus, as they form the parts of imparting quality education to children. With the understanding of the significance of curriculum contributing to quality education, many issues and new dimensions related to curriculum have come into focus. How are curriculum and pedagogy interrelated? Why is pedagogy needed to be understood in relation to curriculum? How should pedagogy follow from the guiding principles of the curriculum? What are the various issues and contemporary changes related to curriculum construction? These are some of the key questions in the context

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of curriculum and pedagogy which need to be discussed at length. This unit is an attempt to explain some key points related to curriculum and pedagogy.

4.2 OBJECTIVES

After going through this Unit, you should be able to:

- recall the meaning of curriculum;
- relate the linkage between Curriculum and Pedagogy;
- explore various issues related to curriculum construction;
- realize the need of contextualized teaching-learning process;
- develop understanding about the concept of curriculum framework and its contemporary perspectives; and
- explain the Choice Based Credit System and its implications.

4.3 UNDERSTANDING THE MEANING OF CURRICULUM

Though you have already studied in detail about the definition of curriculum in Section 2.3.1, Unit 2 of this Block, let us recollect the meaning of the term 'curriculum'. The position paper on National Focus Group on Curriculum, Syllabus and Textbooks constituted in the context of NCF (2005) defines curriculum as follows:

'Curriculum is, perhaps, best thought of as that set of planned activities which are designed to implement a particular educational aim- a set of aims- in terms of the content of what is to be taught and knowledge, skills, and attitudes that are to be deliberately fostered, together with statements of criteria for selection of content, and choice in methods, materials, and evaluation'.(National Focus Group on Curriculum, Syllabus and Textbooks.(2006).NCERT, page no.v)

In the above definition, it is clear that curriculum and pedagogy are closely interrelated. Curriculum deals with what content to be taught, whereas pedagogy focuses on what methods and media to be used to teach the content. Content, methods and media form an integral part of curricular process. In the next section, we discuss how curriculum is related to pedagogy.

4.4 RELATIONSHIP BETWEEN CURRICULUM AND PEDAGOGY

Pedagogy is closely related to curriculum. The latter is concerned with what is being taught, while pedagogy refers to the method of teaching any concepts or propositions in classrooms. The word pedagogy derived from the Greek word *paidos* which means "boy or child" plus *agogos* which

means "leader." It is often described as 'the art of teaching children'. We can define pedagogy as "knowledge of teaching and learning and how the two influence each other in the pedagogic episodes that teachers create to offer learners learning experiences that might inform their developing views of practice". Accounting for the intersection between knowledge about teaching and moments when something pedagogic is expected of the teacher, pedagogy is as much interactive as it is deliberative. Learners often learn as much from the experiences of teachers and from the contexts taught by them. Therefore, pedagogy can be understood as a complex interaction among the "how," "what," and "why" of teaching in the light of the curriculum.

In a pedagogical process, meaningful classroom interactions are needed between teacher and learners. The main aim of pedagogy should be to support learners in building new knowledge upon their prior learning and developing new skills and attitudes. For teachers, it helps them to devise and present curriculum in a way that is relevant to learners, meeting with their needs. This facilitates the learners not only in getting in-depth learning of subject contents, but also in applying them to their daily life situations. Hence, a curriculum should be designed with an approach which facilitates teachers to work together with their learners to come up with the best suitable way for subject contents to be studied.

If a teacher has clear understanding of pedagogy and the curriculum, then s/he will be able to effectively interact with the learners, to know what their learning requirements are and how to meet them accordingly. And this can encourage a healthy dialogue between teacher and learners, as well as among learners themselves. Moreover, everyone shares ideas, questions, and knowledge with others to explore concepts and deepen their knowledge. As mentioned earlier, with good pedagogic understanding, a teacher can help learners share their ideas, and have a sound understanding of how curriculum will be transacted and what is expected of them. Learners will not only increase their knowledge base, but they will also understand about the utility of such knowledge in their life contexts. They can draw on their own cultural knowledge as well, to come up with unique and personalized thoughts and opinions. A curriculum transacted with appropriate pedagogy allows the learners to reflect on new concepts more objectively and meaningfully. If we consider the pedagogy and curriculum in consonance, then we can also learn about what approaches work best for teaching a particular concept. Through this, learners will have space to participate in very personalized teaching-learning processes, rather than becoming mere spectators in their classroom.

Along with the curriculum expectations, the pedagogy must consider such contexts in which learning takes place, and with whom. It is not just about the teaching-learning materials used, but the whole process and strategies implemented in the classroom for achieving meaningful learning. A well-planned pedagogy has great potential to improve the quality of teaching and the way learners learn, by helping them gain a deeper understanding of

curriculum contents. The proper pedagogical approach assists learners in moving beyond simple processes of thinking (basic memorization and comprehension) to complex learning processes (analysis, evaluation, and creation). In this condition, there is plenty space to adopt preferred learning styles with a teaching process that supports the way the learners like to learn.

However, the term “pedagogy” is also used as a substitute for method or technique. Unfortunately, this limited understanding leads to unpreparedness among teachers for conducting a holistic teaching to learners. Therefore, it is important to understand that we must not only focus on the observable dimensions of pedagogy, but also actively investigate into the personal, relational, and improvisational dimensions of pedagogy. Pedagogy, by definition, is a creative endeavour. Requiring knowledge about subject matter, learners, and self, pedagogy is shaped by deliberative and often times, immediate reasoning. Because pedagogic reasoning demands imagination, intuition, and expression, pedagogy can be considered as an art. Thus, pedagogy is more than method or technique. It is the constant production of an experience with learners.

According to the National Curriculum Framework (NCF-2005), engagement between teacher and student engagement is very crucial in the classroom because it has the power to describe whose knowledge will be accepted as part of school-related activities. We have to understand that the learners are not just young people for whom adults should prepare strategies. In place of that, they are critical observers of their own situations and needs. Therefore, they need to be aware that their experiences and perceptions are very important in developing their thought processes and reasoning. We should also acknowledge that children learn many things as their learning abilities, capacities, and knowledge base keep growing due to their exposure to new learning environments. Now, out-of-school children need to be brought into schools to enhance their learning abilities. This is very crucial for children belonging to underprivileged communities, especially girls.

Participatory learning needs to be given a definite and valued place in the classroom. Although, participatory learning in classroom processes is a powerful teaching-learning strategy, but it is losing its pedagogic edge due to its ritualistic use. True participation in the learning process begins with the use of experiences of both the learners and teachers. When both, children and teachers share and reflect on their personal and collective experiences without fear of judgement, it gives them opportunities to learn better about such things which may not be a part of their own social reality. This makes them to understand and relate to differences among them instead of fearing them.

If learners’ social experiences are to be brought into the teaching-learning process, teacher must ensure that the issues of conflict are addressed. Conflict is an inescapable part of many children’s lives in India. They constantly come across such situations that call for moral assessment and action,

whether in relation to subjective experiences of conflict involving the self, family and society or issues of conflict in schools. To use conflict as a pedagogic tool is to enable children to deal with conflicts and facilitate awareness of its nature and its role in their lives. This can be built by encouraging learners to comment, compare and think about elements that exist in their own environment. For this, various sources of knowledge existing in different mediums, such as radio, television, digital media, advertisements, songs, paintings, etc., need to be brought into the purview of classroom to create a rich interaction among learners themselves. A pedagogy which is sensitive to gender, class, caste and global inequalities is one that does not merely affirm different individual and collective experiences, but also locates these within larger social structures of power, and raises many questions, such as whose knowledge is more valuable? This requires evolving various strategies for different learners. For instance, motivating students for speaking up in classroom may be very important for someone, while for others it may be learning to listen to others.

As a pedagogue, the key role of teacher is to provide a safe space for the learners to express themselves, and simultaneously to freely interact among themselves. Teachers need to come out of the role of ‘moral authority’ and learn to listen with empathy and without judgement, and to enable children to listen to each other. While constructively stretching the limits of understanding, learners need to be conscious of how differences are expressed. A trustful environment would make the classroom a safe place where learners can freely share experiences, where issues related to conflict can be smoothly acknowledged and addressed. Especially, for girls and children from under-privileged communities, the space of schools and classrooms should be for discussing processes of decision-making, questioning, discussion etc.

Check Your Progress (1)

Notes: (a) Write your answers in the space provided after each item.

(b) Compare your answers with those given at the end of the unit.

1) Is pedagogy related to curriculum? How?

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4.4.1 Pedagogical Considerations in Curriculum

There was a time when the teacher was considered to be the repository of all knowledge and one who could have distributed it among some, withholding it from many in the society. S/he was both, producer and custodian of

knowledge with a large measure of control over its dissemination. With successive ideological transformations in the society accompanied in the more recent centuries, by important technological changes, the role and status of teacher has been redefined again and again. His/her role in education apparently has diminished. S/he seems to be displaced from the centre of the process of education. The teacher, who was often considered a role model worthy of emulation or a crucial mediator between the learner and the world of knowledge is now treated as a professional. There is an explosion of knowledge that s/he is expected to transmit them to students and s/he contributes little to the creation of knowledge. Nor does s/he have a monopoly of information, with a variety of sources competing in the process of dissemination of information and knowledge to students.

A number of educationists favour a child-centred system of education with a reduced role for the teacher. Rousseau's stress on naturalism induced many thinkers later on to work out a different role for the teacher in relation to his/her pupils. Pestalozzi's pedagogy is emphatically child-centric. Froebel's kindergarten system also looks for a teacher who does not impose himself/herself rather works towards removal of hindrances to the self-development or 'self-activity' of the child. Montessori Method also emphasizes the child's need to escape from the domination of parent and teacher. In Indian context, Tagore, Gijubhai or Krishnamurthy have been strong supporters of child-centred education in their own ways.

Yet, in pedagogic principles propounded by all these educationists, there is an implicit expectation from the teacher, perhaps greater than that in the traditional system. The teacher must know the child more, has to be far more sensitive and perceptive and at the same time, will have to be trained up more systematically to play his/her new role more purposefully. Whatever be the suspicion about his/her potentially oppressive position (Paulo Freire (1970) thinks that a teacher may be equated with an oppressor, prescriber or manipulator of things), no viable alternative arrangement of education has yet been convincingly demonstrated which excludes the teacher or the instructor completely.

If curriculum is understood in the broad sense as an entire range of learning arrangements in a school, then the person most concerned with it and with the largest role to play to give it an actual concrete shape is the teacher himself/herself. No scheme of curricular reforms can succeed without his/her concurrence and support. S/he should have the freedom to improvise wherever needed, modify the modes of teaching-learning, experiment, innovate and finally to acquire teaching skills or maturity through trial and error. Unless s/he owns up the final responsibility of devising the right methods to make each one of his/her learners learn, by mere administrative instruction, quality of education cannot improve. Of course, adequate preparation will be needed to equip him/her for the task by helping her/him acquire necessary professional competence.

There is a paradigm shift that has occurred in the field of education, which teachers must start appreciating to change the nature of pedagogy. Taking a cue from NCF 2005, major shifts have been tabulated below for ready reference:

Table 4.1: Major Shifts in Pedagogy (NCF, 2005)

From	To
Teaching	Learning
Teacher-centric	Learner-centred
Teacher imparting knowledge	Learners active participation in learning
Stable design of curriculum	Flexible methods & curriculum
Teacher gives direction	Learners are autonomous and independent.
Learning from textbooks only	Learning from diverse possible sources
Learning inside classrooms	Learning in a wider context of society and nature
Learning by listening & reading	Learning by doing
Appraisal through few periodic Examinations	Continuous and comprehensive evaluation

Approach to teaching and learning of different subjects in the school will naturally depend on the nature of that particular subject, but a pertinent question is as to how ambitious we can be regarding child's progress in a subject. There are individual differences among children both in terms of her capacity to progress as well as comfort level in different subjects. Idea of child-centred is based on the premise of differences in the aptitudes and potential of children which need to be taken into consideration. Every child should have an opportunity to realize her own inherent potential as fully as possible. Different persons may have different kinds of intelligence that in turn influences their achievements and even their styles of learning. Howard Gardner in his theory of multiple intelligence has identified nine types of intelligence, namely, verbal-linguistic, logical-mathematical, existential, bodily-kinesthetic, musical, spatial-visual, naturalist, intrapersonal and interpersonal. You will study about multiple intelligence in detail in section 5.8 of Unit 5 of this Course. Although as per multiple intelligence theory, the learner should get diverse kinds of opportunities to learn, at the same time expectations from all children cannot be alike in all areas. A child with language ability and potential to grow into a poet should not be forced to become a mathematician or vice-versa.

Check Your Progress (2)

Notes: (a) Write your answers in the space provided after each item.

(b) Compare your answers with those given at the end of the unit.

1) What are the major shifts in pedagogy according to NCF, 2005?

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4.5 VARIOUS ISSUES IN CURRICULUM

In the Unit 3, we have discussed about curriculum development and its steps. Curriculum development is a complex process which is influenced by various issues and factors such as-What should be the approach of developing a curriculum- National or local? Should schools have autonomy to make their own curriculum? Are we developing inclusive curriculum for every child? What is our groundwork before developing a curriculum? In this section, we would try to discuss about these issues in brief.

4.5.1 The National versus Local Curriculum

India is a vast country in terms of diverse population, geography, culture and social life. Therefore, while making a curriculum, because of several diversities in our country, we should always debate over whether we should have one National Curriculum or various local/state level curricula. The arguments in favour of National curriculum are centred on the basic philosophy of 'One Nation-One Curriculum' so that every citizen has the same shared knowledge which binds all together. However, the promoters of local curriculum argue that a single curriculum is not enough for a country like India having so much of diversity. For example, a child living in north-eastern part of India has very different experiences about its geographical surrounding than a child living in the northern plain. Therefore, the curriculum should be contextualized enough with local contents to connect with the experiences/regional context of the children.

In India, we have taken a middle path by suggesting a National Curriculum Framework at National level and giving autonomy to States for making their own curriculum keeping both National Framework as well as regional issues into consideration. The localization of the curriculum will involve the use of local materials both as the subject and object of instruction where local culture will be an integral part of the curriculum (Training Tools for Curriculum Development, UNESCO). However, we must not reduce the curriculum content to only local concepts and materials since this will limit learning of children. Therefore, a 'glocalized' kind of curriculum is needed where the global or national issues should be weaved in with the local materials, languages, issues and contexts. Therefore, the issue of diversity in curriculum needs to be addressed to give strength to the curriculum.

4.5.2 Contextualization of Curriculum

Many educationists have emphasised the significance of contextualising education. A simple meaning of the term is to situate learning in the context of the child's world, and of bridging the gap between the school and socio-cultural context of the learners. It is not just because the contextualization will provide child's own experiences as the best entry points, into the study of different subjects, but also because the main aim of knowledge *is to connect with the world*. Without this, any knowledge is reduced to the level

of mere information. Learners, during their entry in Class-I, already have a rich language base of small words, numbers and symbols. Yet, we hardly acknowledge this and rarely utilize it in classroom. We hardly ask the students to talk about or refer to the world outside the school during our teaching. Therefore, contextualization in teaching-learning process is one of the focuses of curriculum transaction in contemporary education. The Bihar Curriculum Framework-2008, which is a State level Curriculum Framework, has greatly showed this spirit by adding an exclusive chapter on rural education in the Framework.

The concept of contextualization is based on this idea that learners learn best when classroom experiences have meanings and relevance in their lives. The things which are associated with learners can better help them in learning. Here, learning by doing, applied learning, and manipulative learning will be very supporting in executing localization and contextualization in teaching. If learners are expressed to a real learning environment letting them to manipulate, relate, and adapt to various learning opportunities and resources available within the locality or community, profound learning will be assured and realized. This will help teachers and learners in comprehending concepts by relating and presenting lesson on various contextual issues. Through this, the classroom teaching can be well customized and appropriated by teachers. However, this demands a focus in teachers' preparation so that they can be capacitated in using contextualized lesson plans for teaching. Along with this, we can also understand many concepts in a better way by relating them to some distant ideas and examples not the immediate contexts. Therefore, contextualisation should not be imposed on all contents.

Contextualization of curriculum should be an inherent part of pedagogy. To contextualize curriculum, teacher uses local materials, activities, interests, issues and needs from learners' lives. A curriculum helps learners learn, practice and evaluate specific skills and competencies, and contextualized lessons are effective tools for accomplishing this. A contextualized curriculum creates room for learners to pose problems and issues and develop strategies together for addressing them. The process for contextualizing curriculum includes some key steps such as identification of learners' needs and issues; collecting contextual information and materials; preparing and teaching contextualized lessons; and encouraging the learners to use the learning in their real world; and reflecting and accessing the contextualized lesson. In contextualization of curriculum, the socio-cultural pedagogy helps a lot. This pedagogical method often relies on a student-centric approach to teaching, whereby teachers identify different socio-cultural strengths of learners, and nurture those to ensure that learners have a positive sense of self, and can achieve the expected learning.

4.5.3 Relating Curriculum Theory to Practice

A teacher expects their learners not only to learn theory and understand why theories are important but also to learn how to apply the theoretical

frameworks in practice. Too often we hear anecdotal accounts of student teachers in internships who are unable to make this transition from theory to practice with confidence and effectiveness. Perhaps the difficulty in making the transition from theory to practice arises, at least in part, from a failure of the curriculum developer or teacher itself to integrate both theory and practice into the same course in the curriculum in ways that are relevant and meaningful to the student. Such integration helps learners to more closely associate the practical value of learning theoretical concept. In constructivist approach, at present we generally do not see theory and practice as two separate and distant entities, rather we conceptualize them as two complementary aspects of a curriculum which is based on process model. This model is driven by simple principles and places emphasis on judgement and meaning making by integrating the theory and practice, which we say as 'Praxis'.

4.5.4 Integration of Information and Communication Technology in Curriculum

With great technological advancement in this century, integration of ICT in curriculum is one of the prime focuses at present. The ICT explosion has changed the nature of knowing from the ability to recall information to the ability to define problems, to retrieve information selectively and to solve problems flexibly. Therefore, the importance of ICT in curriculum planning has been widely recognised. ICT provides the children to present their own experiences through various multi-media modes with new opportunities to explore their own creative imagination. On this line, we have progressed from computer to various customised learning apps, interactive SMART Classes, virtual classes, etc. now. The impact of ICT on teaching-learning process is increasing day by day and therefore teachers need to learn enough about ICT to use it effectively in the classroom. This, therefore, changes the nature of learning from the need to master topics in class to the need to learn autonomously. Teachers and learners now need to learn how to learn in an ICT rich environment and the curriculum should also give proper space to such opportunities in its content.

4.5.5 Establishment of Standards for Curricular Research and Practice

Another issue is related to establishment of standards for curricular research and practice which is very crucial for improving the quality of a curriculum for the learners. Such kind of focussed researches are highly important to access the impact of curriculum and shape its implementation. In India, various government agencies such as NCERT, SCERT or universities, etc. have major role to play in conducting quality researches on curriculum issues. But still we lack sound standards for curriculum researches in our country. There is need to formulate basic guidelines for this and researchers should be encouraged and given opportunities to conduct quality studies

about curriculum. Field based researches on curriculum implementation should also be promoted.

Check Your Progress (3)

Notes: (a) Write your answers in the space provided after each item.

(b) Compare your answers with those given at the end of the unit.

1) Mention the various issues in curriculum.

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4.6 MAJOR CURRICULUM FRAMEWORKS

There are some basic principles relating to learning among children which find favour with many educationists today. Grounded in those principles, we have various kinds of curriculum frameworks. Here, we are discussing a very significant model of framework, i.e. Integrated Curriculum Framework along with the National Curriculum Framework 2005.

4.6.1 Integrated Curriculum Framework

An integrated curriculum allows children to pursue learning in a holistic way, without the restrictions often imposed by subject boundaries. As benefit, the integrated teaching and learning processes enable children to acquire and use basic skills in all the content areas, and to develop positive attitudes for continued successful learning throughout the elementary grades. An integrated programme includes effective experiences to develop children’s attitudes, skills, and knowledge and to help them make connections across the curriculum. Activities that provide for a range of abilities are beautifully designed in an integrated curriculum. In addition, the activities that are both teacher-initiated and directed and child-initiated and directed are very much celebrated in this kind of curriculum. Whole class, small group, and individual experiences, opportunities for critical and creative thinking, opportunities to experience learning in a meaningful manner are the focuses in the integrated curriculum framework. The framework also emphasises different forms of assessment such as teacher, peer, and self-assessment.

Integration can be simply understood as fusion or unification of different disciplines through various approaches such as multidisciplinary, interdisciplinary and transdisciplinary. In multidisciplinary approach, we generally organize relevant knowledge from the disciplines around a theme (see figure 4.1). There are different ways to develop multidisciplinary curriculum, and they differ in the level of intensity of the integration effort.

In this multidisciplinary approach, we can integrate skills, knowledge, or even attitudes into a curriculum. On the other way, in the interdisciplinary approach of integration, the curriculum is organised around common learning across disciplines. Here, the disciplines are identifiable, however they assume less importance than in the multidisciplinary. Along with these, the transdisciplinary approach of integration breaks all boundaries between the disciplines and directly focuses on core issue. This kind of approach promotes project work.

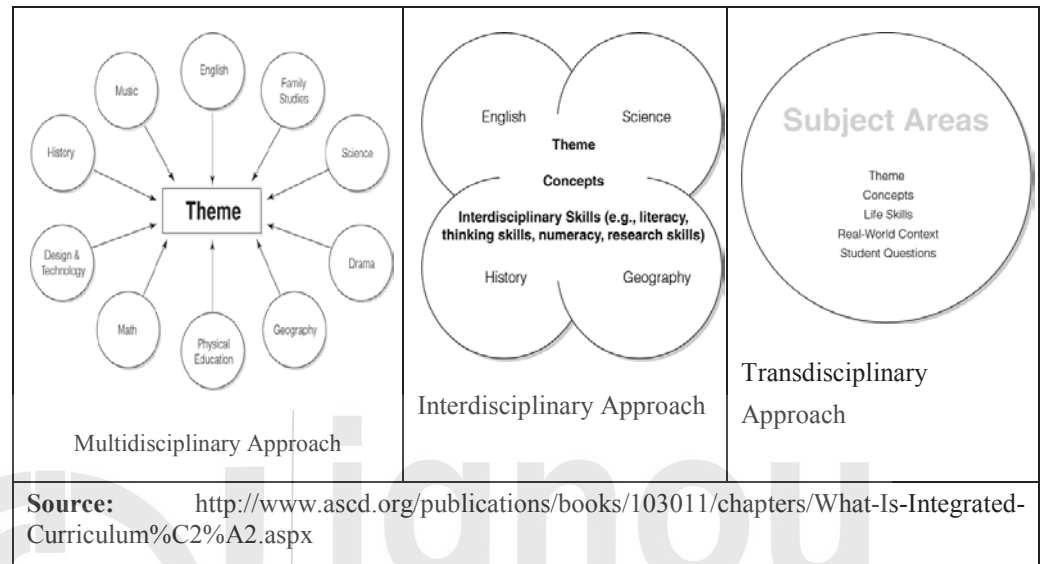


Fig. 4.1: Multidisciplinary, Interdisciplinary and Transdisciplinary Approaches

The above-mentioned approaches will be very helpful in integrating the curriculum at any level. For example, if we are learning about Birds then it is not just limited to Biology, but an integrated curriculum demands to learn about other aspects of Birds such as their role in ecosystem, poems related to birds, their importance in our life, etc. Another approach of integrating curriculum is Project method. Projects involve the investigation of a topic but differ from traditional thematic units because they are fully integrated. In project planning, the disciplines can easily be combined at functional level. The goal is to learn about something, using all the available resources and incorporating the skills, knowledge, and dispositions needed to accomplish that goal. Another way in which teachers plan for integrated curriculum, is by allowing for independent and small group study based on a child's (or small group's) interest and curiosity about the world. The aim is to help children become independent learners. The child or a small group of children may initiate topics spontaneously. The teacher offers resources and teaches the skills and strategies needed individually or through class instruction. These are some key points about the integrated curriculum framework.

Check Your Progress (4)

Notes: (a) Write your answers in the space provided after each item.

(b) Compare your answers with those given at the end of the unit.

1) What are the benefits of Integrated Curriculum Framework?

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4.6.2 National Curriculum Framework-2005

Some of these approaches to integration in curriculum have been emphatically articulated in the NCF 2005. The following three important ideas relating to learning are briefly summarized below:

a) **Primacy of child as an active and natural learner:** It is almost universally agreed now that every child has a natural urge and ability to learn, which is most readily demonstrated by the manner s/he learns language almost autonomously. The idea of child-centred pedagogy means giving primacy to children's experiences, their voices, and their active participation. In our traditional schools, children's experiences are not generally given importance because teachers are considered to be repositories of all knowledge that is worth knowing, and children's voices are not taken into account in the name of discipline and order turning them into passive learners. This scenario must change completely. Every child has a family and social background and learning has an inevitable social character. Every child, therefore, must be valued for what she is and what she comes with to the school. Schools should encourage active participation of children in the process of learning. To nurture their curiosity they should do things, ask questions and pursue investigations on their own.

b) **Learning as a process of construction of knowledge:** In the constructivist perspective adopted by NCF 2005, learning is a process of construction of knowledge. This leads to the idea that learners construct their own knowledge actively by joining new ideas to existing ideas on the basis of materials and activities presented to them. The structuring and restructuring of ideas are features of constructive learning. However, a social aspect is also involved in the sense that knowledge can be created in a group situation. Hence, there is scope for collaborative learning and social construction of meaning as well.

A good teacher actively supports and facilitates the process of knowledge construction in which a child may be engaged. Allowing

children to ask questions, encouraging them to answer in their own words and from their own experiences and engaging them in well-chosen challenging tasks and questions will help them to develop their understanding. On the other hand, restricting them to merely answer questions and that, too, in the words written in the books or said by the teacher and expecting them just to memorize and reproduce whatever is taught are sure ways to obstruct learning with proper understanding.

- c) ***Learning through interaction and dialogue leading to a critical pedagogy:*** Learning happens through continuous interactions with the environment around us, i.e. nature, things and people, both through actions and through language. Our physical activities of moving, exploring and doing things by our own, with peers or in company of adults, and using language- to read, to articulate, to ask, to listen and to interact- are the main processes through which learning takes place. While dialogue, rather than one-way transmission from the teacher's side, will engage the child and induce her to think and reflect. NCF 2005 asserts that critical pedagogy gives many opportunities to reflect critically on any issues in terms of their political, social, economic and moral aspects. Critical pedagogy facilitates collective decision making through open discussion and by encouraging and recognising multiple views of learners.

The National Curriculum Framework 2005 has discussed the kinds of curriculum for different stages. According to it, for primary stage, a child should be engaged in joyful learning by giving them safe space to explore the world around. At this stage, the key objectives are to nurture the curiosity of the child about surrounding (natural environment, artefacts and people), to have hands-on activities with them for acquiring the basic cognitive and psychomotor skills through observation, classification, inference, etc.; and to develop basic language skills i.e. speaking, reading and writing. Similarly, Science and Social Science should be integrated as 'Environmental Studies' along with health and cleanliness as important components. At the primary stage, there should be no pressure of formal assessment and evaluation.

Moving towards the upper primary stage, the learner should be engaged in learning the principles of science through familiar experiences, hands on activities, and designing simple technological models (such as working model of a windmill to lift weights). The learners should also continue to learn more about the environment and health, including reproductive and sexual health, through activities and surveys. Group activities, discussions with peers and teachers, surveys, organisation of data and their display through exhibitions, etc. in schools and the neighbourhood should be promoted as important components of pedagogy at this stage. There should be continuous as well as periodic assessment in the form of unit tests, term-end tests.

At the secondary stage, there should be focus on learning Science as a composite discipline, in working with hands and tools to design more advanced technological models than the previous stage. The activities and analyses of issues concerning the environment and health, including reproductive and sexual health should also be taken as central content. The curriculum at this stage should promote systematic experimentation as a tool to discover and verify various theories, principles and concepts, and working on locally significant issues involving science and technology.

At the higher secondary stage, the framework advocates for introduction of science through its separate disciplines such as Physics, Chemistry, Botany, Zoology, etc. with emphasis on experiments/technology and problem solving. The current two streams, academic and vocational, being pursued as per NPE-1986, may require a fresh look in the present scenario of National Education Policy-2020. As the new policy is recommending that the learners may freely choose various subjects of their interest at secondary level without any restriction of streams. The issue related to the rationalization of curriculum load is also very significant for this stage so that learners will have more time to engage with diverse activities. During this stage, the core topics should be framed taking recent advances into account.

Check Your Progress (5)

Notes: (a) Write your answers in the space provided after each item.

(b) Compare your answers with those given at the end of the unit.

- 1) Discuss the key ideas of the National Curriculum Framework 2005 in brief.

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4.7 NATIONAL EDUCATION POLICY- 2020 AND PEDAGOGY

In the previous unit, we have discussed about the different stages of education as recommended by NEP 2020. Now let us understand the thrust of NEP 2020 with regard to pedagogy at different stages of education. The curricular and pedagogical structure of school education will be reconfigured to make it responsive and relevant to the developmental needs and interests of learners at different stages of their development, especially to the age ranges of 3-8, 8-11, 11-14, and 14-18 years, respectively.

The Foundational Stage will emphasize on flexible, multilevel, play/activity-based learning and the curriculum and pedagogy of ECCE. The Preparatory Stage focuses on building the play, discovery, and activity-based pedagogical and curricular style of the Foundational Stage. This stage will also begin to incorporate some light text books as well as aspects of more formal but interactive classroom learning, in order to lay a solid groundwork across subjects, including reading, writing, speaking, physical education, art, languages, science, and mathematics. The Middle Stage emphasized on building the pedagogical and curricular style of the Preparatory Stage, but with the introduction of subject teachers for learning and discussion of the more abstract concepts in each subject that students will be ready for at this stage across the sciences, mathematics, arts, social sciences, and humanities. Experiential learning within each subject, and explorations of relations among different subjects, will be encouraged and emphasized despite the introduction of more specialized subjects and subject teachers. The focus of Secondary Stage is on multidisciplinary study, building on the subject-oriented pedagogical and curricular style of the Middle Stage, but with greater depth, greater critical thinking, greater attention to life aspirations, and greater flexibility and student choice of subjects.

The thrust of curriculum and pedagogy reform across all stages will not only be on cognitive development but for the holistic development of students equipped with 21st century skills. All curriculum and pedagogy, from the foundational stage onwards, will be redesigned to have root in the Indian and local context and ethos in terms of culture, traditions, heritage, customs, language, philosophy, geography, ancient and contemporary knowledge, societal and scientific needs, indigenous and traditional ways of learning etc. This is to ensure that education is maximally relatable, relevant, interesting, and effective for students. Stories, arts, games, sports, examples, problems, etc. will be chosen as much as possible to be rooted in the Indian and local geographic context. In particular, students at Grade 11-12 will have the opportunity to pursue vocational or any other courses including at a more specialized school, if so desired. It is noteworthy that these stages are purely curricular and pedagogical in nature, designed to optimize learning for students based on their cognitive development.

For Higher Education Institutions (HEIs), the NEP-2020 recommends that the curriculum and pedagogy will be designed by institutions and motivated faculty to ensure a stimulating and engaging learning experience for all students, and continuous formative assessment will be used to further the goals of each programme. The policy also stresses on implementing multidisciplinary approach for teaching-learning process at Higher Education level. For effective learning, the Choice Based Credit System (CBCS) will be revised for instilling innovation and flexibility. HEIs shall move to a criterion-based grading system that assesses student achievement based on the learning goals for each programme, making the system fairer and

outcomes more comparable. HEIs shall also move away from high-stakes examinations towards more continuous and comprehensive evaluation.

(Source: National Education Policy, 2020. Ministry of Human Resource Development. Government of India).

4.8 CHOICE BASED CREDIT SYSTEM (CBCS)

The current higher education curriculum in India does not enable learners to be employable. The traditional, annual method used teacher-centric approach. Independent thinking was not promoted in the annual system. Curricular flexibility, learners' mobility along with disciplinary approach has to be introduced in the emerging socio-economic milieu. CBCS introduces multi-disciplinary approach to undergraduate and post-graduate curriculums. Learners can select courses from a wide range of disciplines to gain mastery of a subject of their choice.

However, the Indian Education system is also facing many challenges in implementing CBCS. The basic elements of CBCS are Semester system, Credit system, Credit transfer, Comprehensive and Continuous Evaluation and Grading. Under Choice-based Credit System (CBCS), learners pursue three types of courses - Compulsory Foundation Courses (relating directly to the subject of study), Elective Courses (allowing for interdisciplinary studies) and Core subjects, where it is compulsory to pursue core subjects every semester and choose electives from a pool of subjects unrelated to their disciplines. This means a Science student can opt for any subject of Commerce or Arts discipline as an elective.

According to the UGC, the main objectives of CBCS are to:

- bring reforms in higher education;
- enhance learning opportunities;
- match learners' scholastic needs and aspirations;
- enable inter-university transferability of learners;
- improve quality of education and excellence;
- bring greater flexibility while completing the course; and
- make educational programmes standardized and comparable across the country.

4.8.1 Conceptual Framework of CBCS

There is need to allow the flexibility in education system, so that learners depending upon their interests can choose inter-disciplinary, intra-disciplinary and skill-based courses. This is possible through Choice-Based Credit System (CBCS). The choice-based credit system not only offers opportunities and avenues to learn core subjects but also explore additional avenues of learning beyond the core subjects for holistic development of an

individual. There are many advantages of this system. Following are some of them:

- CBCS leads to shift in focus from the teacher-centric to student-centric education.
- Student may undertake as many credits as they can cope with (without repeating all courses in a given semester if they fail in one/more courses).
- CBCS allows learners to choose inter-disciplinary, intra-disciplinary courses, skill oriented papers (even from other disciplines according to their learning needs, interests and aptitude) and more flexibility for learners.
- CBCS makes education broad-based and at par with global standards. One can take credits by combining unique combinations. For example, Physics with Economics, Microbiology with Chemistry or Environment Science etc.
- CBCS offers learners flexibility to study at different times and at different institutions to complete one course (ease mobility of learners). Credits earned at one institution can be transferred to another institution.

CBCS will be operated on modular pattern based on module / units called 'credits' wherein 'credit' is defined as the quantum of contents/ syllabus prescribed for a course/ paper and determines the minimum number of teaching- learning hours required. CBCS, like the cafeteria system, enables the learners to take up the responsibility of choosing their own education. For implementing CBCS (UGC- Action Plan, 2009) the following steps are to be taken:

- Review of curricular contents including study papers, term papers, assignments, and experiments.
- All the curricular contents are to be divided into units and sub-units. Credits have to be given to these curricular contents.
- The faculty decides the core courses and electives.
- They evaluate the weightage of core and elective credits.
- The faculty decide the total credits to be earned for each academic programme.
- Core credits would be unique to the programme but elective-credits are likely to overlap with other programmes.
- Learners enrolled in a particular programme would be free to choose and earn elective-credits.

4.8.2 Meaning of the Key Concepts Used in CBCS (UGC)

- 1) **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.

- 2) **Course:** Usually referred to, as ‘papers’ is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.
- 3) **Choice Based Credit System (CBCS):** The CBCS provides learners choice to select from the prescribed courses. There are three types of courses in CBCS- i) Core course, ii) Elective Course and iii) Ability Enhancement Courses.
 - i) **Core Course:** The course designed under this category aim to cover the basics that a student is expected to imbibe in that particular discipline. A course, which should compulsorily be studied by a candidate as a core requirement is termed as a Core course.
 - ii) **Elective Course:** Generally, a course which can be chosen from a pool of courses and which may be very specific or specialized or advanced or supportive to the discipline/subject of study or which provides an extended scope or which enables an exposure to some other discipline/subject/domain or nurtures the candidate’s proficiency/skill is called an Elective Course.
 - iii) **Ability Enhancement Courses (AEC):** The Ability Enhancement Courses (AEC) may be of two kinds: Ability Enhancement Compulsory Courses (AECC) and Skill Enhancement Courses (SEC). “AECC” courses are the courses based upon the content that leads to Knowledge enhancement; i. Environmental Science and ii. English/Hindi/MIL Communication. These are mandatory for all disciplines. SEC courses are value-based and/or skill-based and are aimed at providing hands-on-training, competencies, skills, etc.
- 4) **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the learners.
- 5) **Credit Point:** It is the product of grade point and number of credits for a course.
- 6) **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.
- 7) **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

- 8) **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.
- 9) **Letter Grade:** It is an index of the performance of learners in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.
- 10) **Programme:** An educational programme leading to award of a Degree, diploma or certificate.
- 11) **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
- 12) **Semester:** Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June.
- 13) **Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered learners after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

Check Your Progress (6)

Notes: (a) Write your answers in the space provided after each item.

(b) Compare your answers with those given at the end of the unit.

- 1) What is Choice Based Credit System (CBCS)? How is it contributing to making our education system better?

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4.9 LET US SUM UP

In this Unit, we have learnt the basics of curriculum framework, curriculum and syllabus. We have also understood the critical relation between curriculum and its pedagogical implications. How Pedagogy is very crucial for effective learning has also been explained in this unit. The unit has also explained about the key ideas of National Curriculum Framework 2005 and how it is important to create a holistic education system. The recommendation of NEP 2020 about curricular structuring is also discussed in this unit. The CBCS has been also discussed with its key ideas for transforming higher education in India.

4.10 UNIT- END ACTIVITIES

- Examine curriculum-syllabus document of secondary level of different school boards. Try to compare them in terms of structure, objectives, content presentation, assessment design etc.
- Talk to some children of elementary level and find their views about which kinds of methods of teaching they like very much and why?
- Take some interviews of school teachers and try to know about their challenges related to curriculum implementation and pedagogy.

4.11 REFERENCES AND SUGGESTED READINGS

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4.12 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress (1)

- 1) Pedagogy is deeply related to curriculum. The latter is concerned with what is being taught while pedagogy actually refers to the method of teaching any concept in classrooms.

Check Your Progress (2)

- 1) Refer table 4.1.

Check Your Progress (3)

- 1) National versus Local Curriculum, Contextualization of Curriculum, Relating curriculum theory to practice, Integration of ICT in curriculum, Establishment of Standards for Curricular Research and Practice etc.

Check Your Progress (4)

- 1) An integrated curriculum allows children to pursue learning in a holistic way, without the restrictions often imposed by subject boundaries.

Check Your Progress (5)

- 1) The key ideas of NCF 2005 are primacy of child as an active and natural learner; learning as a process of construction of knowledge; learning through interaction and dialogue leading to a critical pedagogy.

Check Your Progress (6)

- 1) The CBCS provides choice for learners to select from the prescribed courses (core, elective, and ability enhancement courses). This leads to more choices before the students to choose as per their interest. This will positively enhance our Higher Education in terms of generating new knowledge by interested learners.

