Universalisation of school education is one of the most important features of modern nation states. The political, economic and social systems constituting modern nation states rely, to a very great extent, on such universalisation of school education. The quality of citizenship, which define the kind of state one will have, is shaped by such education. If a state wants to have a democratic system of government, it becomes imperative for that state to afford that type of education by which its citizens pick up both the principles and practices of democracy quite early in their lives. The same goes for the kind of economy and social system that a state would like to have for itself. In order to have a free market economy, a state needs to make provision for such education whereby a citizen can learn how a free market economy operates, what its fundamental premises are, which economic institutions help in its functioning, and how she would take part in its various processes. States wishing to become modern democracies have similarly felt the necessity of introducing education that would instil the spirit of mutual respect and peaceful coexistence. Scientific temperament and life skills demanding abilities of both literacy and numeracy at a mass scale have likewise been found necessary for moulding the lives and characters of citizens by modern states. Thus
Subjects in School Curriculum

it goes without saying how education at the school level is indispensable for the foundation, existence and continuing progress of nation states.

It is on the basis of such indispensability of school education that the present Unit discusses subject concerns in school curriculum by sequentially focusing on aspects like why we study certain subjects in schools, why these subjects are considered important, how the content is selected for the framing of the syllabi in these subjects, what kind of inter-relationship do these subjects have, how these subjects are laid out for learners and what kind of materials are provided for the teaching and learning of these subjects.

4.2 OBJECTIVES

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

- discuss why school education concerns itself with certain subject areas and what is the nature of those subject areas;
- explain the concept of subject-based curriculum and the rationale for limiting the scope of each subject area;
- explain the inter-relationships among different subject areas;
- describe what constitutes curricular material vis-à-vis school education and also appreciate the qualitative aspects of such material;
- discuss what constitutes learner-centered pedagogy and how it helps in construction of knowledge; and
- make sense of the debate that is being pursued in relation to learner-centered pedagogy.

4.3 CURRICULUM, SYLLABI AND SCHOOL EDUCATION

All of you are familiar with the concepts of curriculum, syllabi and school subjects. In this segment, we discuss what a curriculum is, what distinguishes the curriculum from the syllabi and how do the syllabi delineate the subjects. It also discusses the concerns which all these three address, with reference to education at the school level, concerns such as goals of education, instructional objectives, processes, and contents that may be laid out at different stages of school education.

Broadly speaking, a curriculum is directional in nature. It provides the framework for the educational process to take place. It, thus, covers all facets of education. It could also encompass the entire spectrum of education, though from a practical standpoint, it may be confined to a certain stage or aspect of education, such as, school education, higher education, technical education, etc. In India, for example, the National Curriculum Framework (2005) covers the entire gamut of school education. Similarly, the National Curriculum Framework for Teacher Education, 2009 elaborates the context, concerns and vision underscoring teacher education in India. In certain instances, a curriculum may also refer to the scheme of teaching and learning across grades or classes in a given subject, such as, history curriculum from classes VI to XII. Such a curriculum includes various themes to be studied in particular classes in a graduated manner, their learning
objectives, and the pedagogical processes to be followed while transacting those themes with likely outcomes. In this sense, a curriculum goes beyond what is called a ‘course of study’. In other words, it provides a perspective plan to a course of study. On the whole, it can be said that curriculum imparts order to education. As stated earlier, it is at its core directional.

A syllabus is more specific in nature. It provides a summary of topics meant to be covered at a certain stage of education, in a particular grade or a class, or in a given subject. For example, in Indian context a syllabus for the elementary stage may include topics laid out for teaching and learning from classes I to VIII in diverse subjects, such as, History, Geography, Social and Political Studies, Environmental and General Science, Mathematics, English, Hindi, etc. In comparison, the class VI syllabus may more specifically refer to the topics that a learner in that class would study in different subject areas. However, when it comes to a particular subject area or discipline, one refers to it as either ‘social science syllabus for the elementary stage’ or ‘history syllabus for class VI’.

In educational context, subject is commonly understood as a body of knowledge in a given area. In this sense, it refers to what is often called a discipline, such as, history, economics, etc. However, it is not unusual for someone connected with education to talk of ‘social science’ as a subject though it is well-known that ‘social science’ is an amalgam of subjects or more precisely disciplines, such as, History, Geography, Social and Political Studies, Economics, etc. In some ways, therefore, efforts are made to distinguish between the two by referring to ‘Social Science’ as a ‘subject area’ and History, Geography, Social and Political Studies, Economics, etc. as ‘disciplines’. This task is often left for the syllabus to do. Since school education also concerns itself with issues other than that of knowledge, the syllabus configures what may be regarded as a subject of study at the school level. Thus, instead of focusing on disciplines as such it categorises them into subjects. For example, disciplines like Physics, Chemistry and Biology are categorized into a subject called General Science. Similarly, to help students at the primary level acquire an understanding of their social and natural environment, topics are chosen from an array of social and general sciences to formulate a subject called ‘Environmental Studies’.

### 4.3.1 Curriculum, Syllabi and Subjects – Inter-relationships

Curriculum, syllabi and subjects are intimately linked to each other. This is particularly so at the level of school education.

It is in the nature of curriculum to appreciate the context in which the desirable process of education is expected to unfold. These contexts differ from country to country, and even within countries, from region to region. So what may be considered as the desirable process of education in Germany or South Korea may not be considered as much desirable in India or in Bangladesh. This is because the curricular context practices in India or in Bangladesh differs from that of Germany or South Korea. By curricular context, what actually referred to, is the social, economic and political situation in a country. However, these are not static situations. Countries across the world wish these situations to change for the better. Education provides the means through which such change could be realised. Therefore, curriculum also contains elements of vision even while it appreciates the given context. Since such elements of vision are contextual and often come tempered with different degrees of practicability, in curricular parlance these are referred to as desirable but in terms of implication they become effective guidelines.
Thus, curriculum provides guidelines that are followed while drafting syllabi for various subjects. For example, the National Curriculum Framework (2005) provides five guidelines, namely:

i. connect curricular knowledge to life outside the school;
ii. ensure that learning shifts away from rote methods;
iii. enrich the curriculum in such a way that it goes beyond the textbooks;
iv. make examinations flexible so that these are integrated with classroom life; and
v. nurture an overriding identity informed by caring concerns within the democratic polity of the country.

These guidelines do not merely give expression to the social, economic and political situations which obtained in the country in 2005 but also present elements of vision which the curriculum sought to achieve by promoting (a) independence of thought and action, (b) sensitivity to others’ feelings and well-being, (c) learning to respond to new situations in a flexible and creative manner, and (d) ability to work towards and contribute to economic processes and social change among school-going children. One finds an implementation of these guidelines in the syllabi of various subjects that were developed following the adoption of this curriculum. Let us take Social Science for an example.

Taking into consideration the five-fold guidelines of the National Curriculum Framework, 2005, the National Focus Group Position Paper on Social Sciences proposed ‘an epistemological shift’ in the study of social sciences at the school level. The objective behind this proposal was “to accommodate the multiple ways of imagining the Indian nation”. Therefore, coming to specific subjects like History, it recommended that “Indian History should not be taught in isolation”. Rather, as per its recommendation, “there should be reference to developments in other parts of the world”. Besides, recognising the ‘pluralistic character’ of our society, it stated that the syllabus and textbooks in History should be developed in such a way that all regions and social groups are able to relate to these. In regard to textbooks, particularly, it stated that textbooks themselves should be seen as “opening up avenues for further enquiry”. Therefore, in a country as vast as India, its recommendation was to have relevant local content as part of the teaching-learning process “ideally transacted through activities drawing on local resources”.

On the whole, the recommendation of the National Focus Group Position Paper on Social Sciences, as far as the history syllabus is concerned, was to focus on conceptual understanding rather than “lining up of facts to be memorised for examinations”.

Based on the syllabus, which flowed from these recommendations, the textbooks in History for various classes thus sought to promote activity-based teaching and learning. As a result, apart from logically presenting the broad narratives on different themes, the textbooks also provided ample illustrations like time-lines, maps, pictorial presentations of various historical personalities and events alongside important sources for students to see, read and reflect upon. Besides, the textbooks have also provided pedagogically innovative in-text and end-text questions for students to think critically and develop critical historical perspectives on diverse issues. Finally, the textbooks also provided hints for students to go beyond the textbooks for further reading and do activities on any topic of their interest.
Such inter-relationships among curriculum, syllabi and subjects can be seen in regard to other subject areas as well.

4.3.2 Concerns Addressed by Curriculum, Syllabi and Subjects with regard to School Education

As the curriculum takes into account the context in which the desirable process of education is to unfold, it tries to grapple with the multiple concerns that lie embedded in that context. Much of these concerns are often found entrenched in the existing system of education. Thus it becomes an inescapable task for the curriculum to address these concerns and bring in changes in the existing system of education. Countries across the world have recognised the merits of doing so especially in the field of school education as it provides the foundation on which the edifice of education rests. A look at the formulation of the National Curriculum Framework, 2005 and the Social Science syllabi and textbooks in History will help us explain this issue.

As we have already noted, the National Curriculum Framework, 2005 put forth five guidelines for syllabi and textbooks development. These guidelines actually resulted from a realisation that “learning has become a source of burden and stress on children and their parents”. Therefore, the challenge before the curriculum was to try and eliminate or at least substantially reduce this burden. Typically, most of us understand this burden on school-going children to be a physical one as it is not unusual to find people – parents, politicians and social activists – complaining against children carrying bagful of books and other assorted necessities on their backs to school. This is, of course, a concern that needs to be addressed. But what was more worrying from the point of view of the curriculum was the burden of incomprehension. In other words, the curriculum was concerned about the children’s inability to understand and relate to what was being taught in their schools through textbooks and otherwise. This burden of incomprehension was reflected in examination after examination as students performed poorly and in a number of cases took to extreme measures like dropping out of school altogether. The National Curriculum Framework, 2005 emphasised on this issue and directed two immediate remedial measures to be taken up. One of them was to make the textbooks interactive and the second was to allow the children to construct their own knowledge and become an integral part of the teaching-learning process.

In relation to the first measure, we have already stated how the history textbooks have been made interactive. However, making a textbook interactive is not just about addressing a technical concern. It is rather about addressing much deeper curricular concerns.

In order to understand such concerns, we may take a look at what the National Curriculum Framework, 2005 says on the teaching and learning of social sciences, particularly History as a subject. It says content in social sciences should aim at raising students’ awareness through critical exploration and questioning of the familiar social reality. This is because social sciences are often considered as non-utility subjects and therefore it is all the more necessary to emphasise that they provide social, cultural, and analytical skills required to adjust to an increasingly interdependent world and deal with the political and economic realities. In relation to history particularly a question that is frequently asked is about what a student will do after studying facts that have little relevance to the times that we are living in. The wider perception that a student studying history merely replicates what he/she studies in his/her textbooks often gets worsen by the stereotypical teaching-
learning material that we produce and the methods of teaching that we employ in our schools. Long syllabi and evermore voluminous textbooks also make the subject insufferably burdensome. This propensity towards providing information in detail leaves students with little option but to learn by rote. The reductionist approach often followed in explaining historical phenomena make our rich and varied history look so predictable that it divests students of any creative interest in the subject. Teachers’ dependence on textbooks makes things worse. In certain cases more enterprising teachers do teach with the help of visual aids, yet the process of teaching and learning remains firmly within the ambit of the textbooks and thereby encourages only rote learning. In addition, keenness among subject experts and teachers to claim and demand mathematical accuracy in textbooks and student answers to questions in examinations make the teaching and learning of the subject uninteresting, monotonous and of little consequence.

It is to address such concerns that the syllabi in History had to be devised in such a way that students develop a sense of history and no longer see it as a set of facts about the past. Thus it had to focus on enabling the students to acquire a capacity to make interconnections between processes and events, between developments in one place and another, and see the linkages between histories of different groups and societies. This was to be done without overburdening the students with an excess of detail in the textbooks and also by allowing teachers adequate time to dwell on specific themes in depth. Consequently, the history syllabus at the upper primary stage focused on Indian history from the earliest times to the present covering one chronological period in one class thereby imparting understanding of the social, economic, political and cultural processes of that period in that class i.e. ‘Ancient India’ in Class VI, ‘Medieval India’ in Class VII, and ‘Modern India’ in Class VIII. Coming to the secondary stage, it made an attempt to familiarise students with some of the diverse forces and developments that have contributed to shaping the history of the contemporary world and India within that larger history. Taking off from there it chose a number of significant themes of World and Indian history at the higher secondary stage to let students learn the art and craft of history by delving deeper into those themes.

It is on the basis of such nuanced understanding of the curricular concerns that the syllabi in all subjects are developed. The development of textbooks follows similar understanding.

**Activity 1**

Collect copies of different Curriculum Frameworks. Make a comparative chart of the curricular concerns they have sought to address. Write critical notes on the guidelines they have recommended for the syllabi and textbooks to follow.

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Check Your Progress 1

Note:  
1. Write your answer in the space given below.
2. Compare your answers with the ones that are given at the end of the unit.

1. What do you mean when you talk about curriculum? How is ‘curriculum’ different from ‘syllabus’?

2. What are curricular concerns? How are these concerns addressed by the curriculum? Provide examples to support your answer.

4.4 DOMAINS OF SCHOOL SUBJECTS

Following our discussion on the meaning, import and inter-relationship among curriculum, syllabi and subject areas, it now requires us to discuss about the domains of school subjects. The present segment discusses these domains. Broadly marked as humanities, social sciences, sciences and mathematics, these domains encompass various subjects that are generally taught at the school level. Besides, the segment also discusses how it takes an integrated curriculum to find balance and establish critical linkages among these domains.

4.4.1 Broad Areas of School Education – Humanities, Social Sciences, Sciences and Mathematics

Since when the humankind has conceived of education, it has recognised two foundational aspects of human existence: one, the core faculties of human mind; and second, the empirical needs of material life. At an existential level, one cannot separate one from the other. Therefore, the basic conception of education from the beginning has always emphasised on integrating the two, especially at the initial stages of learning before one goes on to pursue a particular branch of knowledge because of innate interest or chooses to adopt a vocation for livelihood in adult life. It is assumed that once an individual has acquired the basics of all that are essential in life, it becomes easier to go forth and advance in any area or domain of one’s own choice or persuasion. This is a pyramidal conception of education – the broader the base, the higher can be the edifice.

So, what are the domains that would constitute the base of education? The ‘aims of education’ at any given time provide us with some answer to this question.
the National Curriculum Framework, 2005 puts it: “At any given time and place they can be called the contemporary and contextual articulations of broad and lasting human aspirations and values.” So, the guiding principles, which we have discussed earlier, have provided the basis for the National Curriculum Framework, 2005 to articulate these aims to be:

a) building a commitment to values of democracy like equality, freedom, justice, concerns for other’s well-being, secularism, and respect for human dignity and rights;

b) developing the ability to work and participate in the economic processes and social change;

c) providing opportunities to enhance the child’s creative expression and the capacity for aesthetic appreciation; and

d) learning to learn and the willingness to unlearn and relearn as means of responding to new situations in a flexible and creative manner.

Following these aims, the National Curriculum Framework, 2005 has arrayed the domains of learning to be (a) Language, (b) Mathematics, (c) Science, (d) Social Sciences, (e) Art Education, (f) Health and Physical Education, (g) Work and Education, and (h) Education for Peace. Besides, it has also dealt with issues that are to be sensitively handled within each of these domains. For example, in the domain of ‘Language’, it speaks of the importance of recognising “the inbuilt linguistic potential of children” and to aligning the programme for language teaching in schools “to build on this resource” and “strive to enrich it through the development of literacy (in scripts including Braille) for the acquisition of academic knowledge”. Similarly, in the domain of ‘Mathematics’, going beyond the narrow aim of developing useful capabilities relating to numeracy, it sets a higher aim of developing “the child’s resources to think and reason mathematically, to pursue assumptions to their logical conclusion and handle abstraction” as “a way of doing things” with “the ability and the attitude to formulate and solve problems”. In the domain of ‘Science’, noting that “good science education is true to child, true to life and true to science”, it advocates the science curriculum to be instrumental “for achieving social change in order to reduce the divide based on economic class, gender, caste, religion and region” by encouraging inquiring skills in place of rote learning. In the domain of ‘Social Sciences’, it focuses on having the requisite perspective to build “the knowledge base for a just and peaceful society”. So far as the other curricular domains are concerned, it draws special attention to the status of arts and health and physical education recognising these along with work and peace education to be fundamental for economic, social and personal development of every child. Hence, it calls upon the schools to play a major role in ensuring that children having education in all these domains grow into adulthood as self-reliant, resourceful, healthy and peace-oriented beings.

Prior to it, the National Curriculum Framework for School Education, 2000 had also recognised the utility of allowing school going children to have their learning experiences through various classified subject areas. These included: (a) Language, (b) Mathematics, (c) Science and Technology, (d) Social Sciences, (e) Art of Healthy and Productive Living at Primary Stage, (f) Work education, Art Education and Physical education at Upper Primary and Secondary Stages, and (g) Vocational Education as a stream alongside other streams at the Higher Secondary Stage. The reasons and rationale of identifying these domains of curricular studies were
more or less the same as we found them in case of the National Curriculum Framework, 2005. As the latter states quite candidly, “the main areas relevant for curricular planning have remained remarkably stable for a long time, despite major changes in social expectations and the academic study of different broad disciplines”. Therefore, what one finds different from one to the other curriculum framework in regard to curricular domains is not so much in the areas of study but in their specific points of departure in keeping with the emergent needs of the time. This is evident from a comparison between the two above cited curriculum frameworks.

### 4.4.2 Issues Concerning Integrated Curriculum

Even as learning is sought to be facilitated through neatly categorised and well labelled subject areas, yet from the perspective of a learner it all makes a composite whole. For example, learning a language at the primary stage not only enables a child to know how to use words, phrases, and sentences but also help her to understand and interpret diverse phenomena, which span across curricular areas. Similarly, learning mathematics, as the National Curriculum Framework for School Education, 2000 puts it, “helps in the process of decision-making through its application to real life situations in familiar as well as non-familiar situations”. As it goes on to say, “Apart from being a distinct area of learning, it helps enormously in the development of other disciplines which involve analysis, reasoning and quantification of ideas”. Learning science and social sciences likewise nurture the abilities of children to observe, analyse, explore, question received knowledge and find constructive solutions to problems of life despite having varied methods of inquiry. Not surprisingly, therefore, learning and acquisition of knowledge often tend to be a unified enterprise for learners at the school level.

It is with this recognition that the National Curriculum Framework for School Education, 2000, made a pitch for an ‘integrated curriculum’. As it stated, “Imaginative and discreet planning of appropriate learning experiences makes it possible for the curriculum objectives to be realised. Well planned activities and teaching-learning strategies facilitate these experiences which ought to make an integrated whole”. It also sought to address another concern linked to integrating diverse curricular concerns of local, national or international concerns. To quote it again, “At a time when concerns such as ‘literacy’, ‘family system’, consumer education’, ‘environmental education’, tourism education, ‘human rights education’, peace education’, ‘population education’, and ‘safety education’ are making a case for separate place in the school curriculum, the best approach would be to integrate these ideas and concepts, after a careful analysis, in the existing areas of learning”.

The points mentioned above lead us to ask, ‘What is meant by an integrated curriculum?’ To put it simply, it means connecting various curricular areas in such a manner that it becomes truly wholesome and far more enriching from a learner’s point of view. One way of doing it is to weave the curriculum around well designed themes. The National Curriculum Framework, 2005 has given the example of ‘water’ as such a theme. Another example given is ‘market’. One can teach as many subjects cutting across curricular areas through these themes. Sometimes, such an approach to framing curriculum is also called ‘inter-disciplinary’ or ‘multi-disciplinary’ approach. There is another approach known by the name of ‘trans-disciplinary integration’. This is essentially one of the many teaching-learning strategies, which come under learner-centered pedagogy. In this approach, teachers
organise curriculum around learners’ questions and concerns. Students develop life skills as they apply inter-disciplinary and disciplinary skills in real life context making learning much more practical and comprehensible. This kind of curriculum is often facilitated by project-based learning.

However, there are obvious concerns linked to any form of integrated curriculum. It is a fact that the concept of integrated curriculum stems from the ever widening scope of school education. A lot more is sought to be taught to learners early on keeping in view the emerging complexities of life faced by the multitude of all nationalities. At the same time the basics of education cannot also be given away as these constitute the core of learning at the school level. This has created a paradoxical situation. To overcome this paradox, the National Curriculum Framework for School Education, 2000 has justifiably called for appropriate strategies to work out such integration in existing subject curricula. The various other ways of integration as discussed above offer substantive options for educators at different levels to adapt to these in their own contexts.

**Activity 2**

*Collect material on ‘integrated curriculum’ from different sources and write a critical essay on the topic based on your reading of such material.*

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**Check Your Progress 2**

**Note:**

a) Write your answer in the space given below.

b) Compare your answers with the ones that are given at the end of the unit.

3. How are aims of education linked to deciding on what ought to constitute subject areas for school education?

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4. What do you mean by an integrated curriculum? What are its various forms? Is an integrated curriculum preferable to a well classified curriculum?

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4.5 CURRICULAR MATERIALS

Following our discussion on curriculum, syllabi and the domains of school education, we shall now dwell on curricular materials which are also known commonly as teaching-learning materials. These teaching-learning materials range from textbooks, workbooks and laboratory manuals to non-detailed texts or secondary reading materials and other sources of learning. Whereas the curriculum provides the guidelines for the system of education to follow, it is the syllabi and the curricular materials, which lay down the outlines of the courses to be learned, their learning objectives, the course content, and the processes to be adhered to while transacting those courses in classroom situations. Besides, the curricular materials also provide learning indicators and exercises for assessment of learning attainments. Clearly, all these aspects show how and to what extent curricular materials are crucial for the achievement of the overall educational goals in a system.

4.5.1 Different Types of Curricular Materials

Curricular materials are also known as instructional materials. In this sense, curricular materials could be of two types. The first one belongs to the category of those which are prescribed whereas the second one is usually accompanying material to the first ones. Textbooks, workbooks, laboratory manuals, etc. belong to the first category and materials such as dictionaries, atlases, supplementary books, grammar books, ‘do-it-yourself practice manuals’, etc. belong to the second category.

While the materials belonging to the first category flow directly from the curriculum abiding its guidelines in full measure, the materials belonging to the second category are often open ended and cater to the multiple learning needs of teachers and students alike. Also by virtue of being transactional in nature the materials belonging to the first category keep a number of parameters in mind. At the outset comes the number of periods allocated to a subject in a class during an academic session. Transactional materials ought to have content that can be transacted within the confines of such time. Second, transactional materials need to maintain a median standard. This becomes imperative to cater to the varying pace of learning by different sets of students. Third and what is most significant is that transactional materials have to adhere to core values of a nation while developing content. Sometimes, such parameters are considered detrimental to constructivist and liberal education. However, in their absence, education runs the risk of becoming aimless.
The materials belonging to the second category often carry the educational process further both as accompanying reference materials in the classrooms and as learning-enrichment materials beyond the classrooms. Such materials also take away a lot of burden from the transactional materials. For example, the latter need not be encyclopaedic in terms of giving space to plentiful information on every single topic, definitions of all technical terms used in the texts, visual and graphical illustrations of all kinds and long extracts from diverse sources once enough references are given therein to all such details which students can find in supplementary materials. As the National Curriculum Framework, 2005 states: “The triangular relationship between high-speed classroom teaching, heavy homework and private tuition, which is a major source of stress, can be weakened if textbook writers focus on elaboration of concepts, activities, spaces for wondering about problems, exercises encouraging reflective thinking and small-group work, leaving the definition of technical terms to a subject dictionary”. This explains how curricular materials belonging to both the categories complement each other and work in tandem to address different curricular concerns.

Curricular materials are also sometimes classified depending upon who these are meant for. Prescribed materials such as textbooks, workbooks, laboratory manuals, etc. are often meant for students thus making a category of their own. However, what generally skips notice is the fact that “school is a structured space for guided learning”. Hence materials that are meant predominantly for students also require mediation by teachers. This makes it as much important to have curricular materials meant for teachers. Teaching manuals, handbooks, teachers’ annotated editions of textbooks, source books on assessment, etc. belong to this category. To quote the National Curriculum Framework, 2005 again, “Any move to introduce a new set of textbooks or a new kind of textbook should include the preparation of handbooks for teachers. These handbooks should reach principals and teachers before the new textbooks do. Teachers’ handbooks can be designed in many different ways. They need not cover the content of the textbook chapter-wise, though that can be one of the approaches. Other formats can be equally valid i.e., offering a critique of established methods and suggesting new ones, and including lists of resource materials, audio and video materials and sites on the Internet. These would provide tips for teachers, which they could use for lesson planning. Such source books need to be available during in-service training of teachers and during meetings when they plan their teaching units”.

Indeed, curricular materials for teachers are not only essential when any move to introduce a new set of textbooks or a new kind of textbooks are made, but such materials form a critical component of quality education. To what extent the system of education can effectively address the curricular concerns depends upon the quality of teaching that it can ensure. Therefore, it needs to constantly engage itself with the task of developing, enriching and updating such curricular materials meant for teachers.

In practice, curricular materials belonging to both these categories supplement each other and make the teaching and learning environment in schools lively and productive.

4.5.2 Importance of Curricular Materials in School Education

All of us are aware that textbooks are the most important source of learning for school children. In a sense, textbooks are the crucible on which the entire system
of school education relies. It is this realisation which perhaps makes most nations focus so much on textbooks.

Questions like what to teach, how to teach and what must and how much children should learn at what stage usually find suitable answers in textbooks. In many ways textbooks also make it possible for children from different social and economic backgrounds to access education in a uniform way. This is very significant from an Indian perspective. Here a considerable number of people live in villages. Children going to schools in these villages have little access to sources of information other than textbooks. There is also a sizable percentage of population in India which lives below the poverty line. For children belonging to these families, whether in rural or urban settings, textbooks open up the world of knowledge.

Textbooks are often designed as self-learning materials. Not only that they impart standard knowledge and information to students in different curricular areas and subjects but also they do it in a manner which students find easy to learn from. Again, this is an aspect which is quite pertinent in the Indian context. There are many schools in the country with a single teacher per subject. It becomes difficult for them to cater to the learning needs of students at different levels. In many instances, students, particularly first-generation learners, also find themselves in a crucial situation of not having anyone at home to help them academically. Textbooks try to bridge these gaps in the process of teaching and learning in schools.

Textbooks also serve as important instruments through which students’ learning achievements are measured. This particular aspect undoubtedly raises many important questions. One of these is related to the syndrome of rote learning. Traditionally, exercises given at the end of each chapter in textbooks require students to glean answers from within the textbooks. This prevents creative learning at the level of the students. Giving credit to textbook-based answers as the most appropriate ones forecloses the option of taking to reflective teaching at the level of the teachers. However, these are issues more related to the type of textbooks in use. Besides, rote learning is also due to the tools and techniques that are employed to assess student learning. As textbooks give more primacy to analysis of facts rather than packaging information, the scope for rote learning gets limited. Similarly, as student assessment practices change with necessary modification in the typology of questions, greater incentive accrues for innovative answers. Thus, textbooks as the most important curricular material hold immense potential to make education accessible and exciting at the same time.

The necessary accompanying materials to the textbooks are workbooks and laboratory manuals. In subjects like languages workbooks are a natural corollary. At least in primary and upper primary classes, workbooks provide students opportunities to go beyond textbooks and engage with tasks that require understanding, knowledge and skill. Such exercises also help students gain confidence in their ability to go for creative writing and self-articulation on issues of particular interest. In other words, workbooks facilitate a student’s journey from the familiar to the unfamiliar and thereby serve an important goal of education, which is construction of knowledge. Similarly, in science subjects, laboratory manuals guide students to conduct experiments not only to revalidate stated scientific principles, but also to find answers to newer puzzles. Much of student creativity relies on such exploratory laboratory experiments.

As has been stated earlier, the second category of curricular materials such as dictionaries, atlases, supplementary books, grammar books, ‘do-it-yourself practice
manuals’, etc. are often not prescribed, but recommended. The importance of these materials for the teaching-learning process is well recognised across the board. Dictionaries, for example, not only provide meanings of words but they also enlighten students about their origin, usage, pronunciation, etc. There are also subject-specific dictionaries, which elaborate on the key concepts and terms used in those subjects. In fact, without these dictionaries, first of all, it would be a mammoth task for the textbooks to explain every single term used in them and, secondly, it would also be extremely difficult for both students and teachers to make proper sense of such terms. Such dictionaries typically provide information not only about the applied sense of the terms used but also deal with the events, ideas, personalities and phenomena associated with particular subjects, thus making comprehension of those subjects much easier. Similarly, atlases provide crucial inputs to teachers and students to visualise complex themes. In social sciences particularly both information and analysis, be it in geography, history, political science or economics, rely extensively on map work. Specialised atlases carrying thematic and illustrated maps often cater to such needs. Supplementary books are the other resources, which help teachers and students rely on not only for additional information but also to deepen their understanding on issues and concerns touched upon by textbooks. Besides, these books also help in doing projects and activities. Libraries well-stocked with such resources make the processes of teaching and learning more purposeful and expansive.

Teacher-made materials like charts, graphs, tables, timelines, and tools of assessment like criterion-referenced and competency-based questions, study packages, etc. could also be considered as curricular materials belonging to this category. Such materials have their own importance as teachers actively engaged with the process of teaching and learning of a given subject are more attuned to the learning needs of their students.

**Activity 3**

*As a teacher, make a list of supplementary books, audio-visual materials, kits and other resources for teaching and learning of your subject at the secondary level. Provide brief assistive notes to all such materials listed by you.*

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6. What are the teacher made materials which are considered as curricular materials?

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4.6 IMPLICATIONS OF CURRICULAR DIVISIONS FOR LEARNER-CENTRED PEDAGOGY

By now you might have got a fair sense of what is a curriculum, how is it related to syllabi in different subject areas, how are different subjects areas chosen by the curriculum for imparting education at the school level, what are curricular materials and what importance do they carry in relation to school education. It now then makes sense to talk about pedagogy, which, going by its lexical meaning, refers to ‘strategies of instruction’. It is fairly understandable to anyone associated with the process of school education that simply prescribing a syllabus or a course of study in any subject area by itself will not achieve the desired learning outcomes unless it is backed by learner-centric methods of delivery at the end of its recipients, whether in the classroom or outside of it. So far as the classroom is concerned, what makes the processes of instruction learner-centric are the ways in which the teacher deals with the course content by involving the learners in all its activities – from reading a passage from the textbook to analysing its various points through debates and discussions in the light of the learners lived experiences to posing questions and trying to find reasonable answers to those questions. Outside the classroom, it is the textbook and other curricular materials about which we have already discussed before, which help a learner in any subject area to understand, interpret and draw conclusions for construction of knowledge. In this segment, we will discuss about such processes of teaching and learning at some length and through such discussion focus on the rationale of dividing the curriculum into subject specific domains to facilitate learner-centred teaching-learning practices.
4.6.1 What is Learner-centred Pedagogy?

‘Why is pedagogy necessary’? This is an obvious question in relation to the process of education, and more so, in relation to school education. Pedagogy becomes necessary as the process of education itself is loaded with objectives. In order to achieve those objectives, there ought to be methods in place.

For long, in many societies, education was thought to be a process through which their budding citizens could be moulded into desirable shape and character. The contrasting systems of education prevalent in the ancient Spartan and Athenian societies provide us with such examples. During the colonial period in India an admitted aim of introducing the English education was to make Indians adopt the English ways of thinking and lifestyle. After India achieved independence an important goal of education became nation building and the participation of the country’s young in that process. Thus suitable curriculum, textbooks and methods of imparting education were devised accordingly.

As it is clear by now, in all these instances the child or the budding citizen, in a sense, was the object of education. However, as societies have matured, they have come “to recognise the ‘child’ as a natural learner and ‘knowledge’ as the outcome of the child’s own activity”. This recognition forms the basis for devising child-centred pedagogy. The National Curriculum Framework, 2005 delineates it in the following way. To quote: “Child-centred pedagogy means giving primacy to children’s experiences, their voices, and their active participation”. This kind of pedagogy requires us to plan learning in keeping with children’s psychological development and interests. The learning plans, therefore, must respond to physical, cultural and social preferences within the wide diversity of characteristics and needs. Our school pedagogic practices, learning tasks, and the texts we create for learners tend to focus on the socialisation of children and on the ‘receptive’ features of children’s learning. Instead, we need to nurture and build on their active and creative capabilities – their inherent interest in making meaning, in relating to the world in ‘real’ ways through acting on it and creating, and in relating to other humans.” Thus, in essence, learner-centred or child-centred pedagogy refers to an educational process where everything – from developing curriculum, syllabi, textbooks to devising teaching strategies in classrooms and beyond it – is perceived from a child’s or learner’s point of view and designed and conducted accordingly. This leads us to dwell on how learner-centred pedagogy helps in construction of knowledge.

4.6.2 Learner-centred Pedagogy for Construction of Knowledge

As part of our daily observation we see how after birth a child grows into adulthood by getting involved with the social and natural environment around her and learning continuously from both. This is a natural ability, which every human child is endowed with. And, on the part of that child, learning from the social and natural environment results in formation of subtle understanding and ideas. This helps her in forming her personality, which, in a sense, is knowledge based. In other words, the natural process of growing up or socialisation is also a process of knowledge construction.

However, this natural process has inbuilt limitations. It is not always possible for a child to critically engage with and draw correctly from the complex social and natural environment surrounding her all by herself. Many a times failure in doing
so leads to different kinds of distortions. Therefore, she requires constant mediation of more experienced and knowledgeable persons around her in this informal process of knowledge construction. A school is a place, which institutionalises this process of knowledge construction. In the words of the National Curriculum Framework, 2005, “Schools as institutions provide new opportunities for all learners to learn about themselves, others, and society, to access their inheritance and engage with it irrespective of and outside the access provided by one’s birth into a family and a community. The formal processes of learning that school makes possible can open up new possibilities of understanding and relating to the world”.

We may measure the prevalent teaching-learning practices in our schools against this pronouncement. The National Curriculum Framework, 2005 sums it up well by saying, “Children’s voices and experiences do not find expression in the classroom. Often the only voice heard is that of the teacher. When children speak, they are usually only answering the teacher’s questions or repeating the teacher’s words. They rarely do things, nor do they have opportunities to take initiative”. Going beyond this prognosis we may also add by saying that what the children actually state in classrooms, while responding to teachers’ questions, are not something that they have formulated based on their own understanding of the issues involved or after harnessing different sources of knowledge but rather what they have been taught based on information and deductions given in textbooks. Furthermore, what the teachers usually dole out in classrooms are much of the same things thus making the entire process just flow from the textbook and end with it leaving no scope for construction of knowledge through active learning. This phenomenon has been caught concisely in the National Curriculum Framework, 2005, which says, “Frequently, the notions of ‘good student’ that are promoted emphasise obedience to the teacher, moral character, and acceptance of the teacher’s words as ‘authoritative’ knowledge”. On the whole, these practices rail against the actual goal of education, which is knowledge creation. Therefore, it is necessary to devise and have teaching-learning strategies where the child is kept in the centre. This includes the development of a child-centred curriculum, which informs accordingly the design of textbooks, teaching strategies, annual academic and activity calendars of schools, and also student assessment strategies. As the National Curriculum Framework, 2005 says, “Children will learn only in an atmosphere where they feel they are valued”.

### 4.6.3 Merits and Demerits of Learner-centred Pedagogy

So far, we have discussed about the need for learner-centred pedagogy keeping in view what has bothered our system of education. In other words, we have discussed about the merits of learner-centred pedagogy alongside its need. For one, this approach puts the hand where the mouth is. As the aim of education is to enable a child to realise his innate potential, it behoves that it becomes responsive to his needs. The learner-centred pedagogical approach does this. Children tend to learn in many ways depending upon their inherent capacities and natural tendencies. Therefore, a ‘one-size-fits-all’ approach fails to cater to their diverse needs. When insisted upon, this kind of approach actually turns away many of them from the system itself. Moreover, a system of education is expected to promote innovation and creativity. Failing this, a society faces the spectre of remaining mired in mediocrity and poverty. A system of education, which does not provide opportunities for questioning or learning in creative, explorative ways cannot promote or nurture a culture of knowledge creation. A learner-centred pedagogic approach offers such possibilities.
However, no system or approach is beyond limitation. Learner-centred pedagogy works well when the system is already in a position to implement it. In other words, learner-centred approach needs to reckon ground realities. Often the pre-requisites of such an approach are difficult to meet in an evolving system. This is so especially where (a) the student population is too large in comparison with teacher availability, (b) teachers are not adequately trained or motivated to implement such an approach, (c) physical as well as curricular resources in schools are perennially in short supply, (d) teachers are engaged more with managerial responsibilities than in working out teaching strategies, and (e) the systems of school management are more administratively attuned than academically oriented. Besides, there are also academic limitations associated with this approach. First of all, it makes the process of mediation rather weak in the overall teaching-learning process by redefining the role of teachers as mediators between the courses of study and the learners. Secondly, it saddles the process of learning assessment with uncertainties. In a situation where multiple answers crop up to a specific question it becomes difficult to grade them appropriately thereby making the whole exercise grossly subjective. Thirdly, it leaves many learners clueless about what is right and what is wrong when teaching-learning takes place much through debates and discussion. Lastly, providing “opportunities to try out, manipulate, make mistakes and correct oneself”, which are essential in a learner-centred approach, sound akin to repeatedly allowing the reinvention of the proverbial wheel.

Action research undertaken by teachers on this score may point out other limitations. But these are not by themselves insurmountable. Many countries and top schools in India have indeed become far more attractive as destinations of gainful education based on their reputation of pursuing learner-centred curriculum and pedagogy.

**Activity 4**

*As a subject teacher prepare a presentation highlighting how you propose to teach a particular theme or lesson using learner-centred pedagogy.*

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Check Your Progress 4

Notes:  

a) Write your answer in the space given below.

b) Compare your answers with the ones that are given at the end of the unit.

7. What do you mean by learner-centred pedagogy? What are its needs?

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8. What do you mean by construction of knowledge? Why do you think it is important?

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9. List the merits and demerits of learner-centred pedagogy.

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4.7 LET US SUM UP

Universalisation of school education is one of the most important features of modern nation states. Curriculums provide the frameworks for the educational process to take place. Curriculums also impart order to education. A syllabus is more specific in nature. It provides a summary of topics meant to be covered in a certain stage of education, in a particular class or in a given subject. In educational context, a subject is commonly understood as a body of knowledge in a given area. It also refers to what is often called a discipline. Curriculum, syllabi and subjects are intimately linked to each other. This is particularly so at the level of school education. Curricula also contain elements of vision even while they appreciate the given contexts. They also provide guidelines that are followed while drafting syllabi for various subjects. Based on such syllabi, textbooks are developed in different subjects for various classes. Curricula also take into account multiple concerns that lie embedded in societal contexts. What are the domains that should constitute the base of education? The ‘aims of education’ at any given time provide us with some answer to this question. Even as learning is sought to be facilitated through neatly categorised and well labelled subject areas, yet from the perspective of a learner it all makes a composite whole.
An integrated curriculum means connecting various curricular areas in such a manner that it becomes truly wholesome and far more enriching from a learner’s point of view. However, there are obvious concerns linked to any form of integrated curriculum. There are different ways of integration which offer substantive options for adaptation by educators at different levels.

Curricular materials are crucial for the achievement of the overall educational goals in a system. Curricular materials could be of two types. The first belongs to the category of those which are prescribed whereas the second are usually accompanying materials to the first ones. Curricular materials are also sometimes classified depending upon who these are meant for. Curricular materials for teachers are not only essential when any move to introduce a new set of textbooks or a new kind of textbook is made, but such materials form a critical component of quality education.

‘Why is pedagogy necessary’? This is an obvious question in relation to the process of education, and more so, in relation to school education. As societies have matured, they have come “to recognise the child as a natural learner and knowledge as the outcome of the child’s own activity”. This recognition forms the basis for devising child-centred pedagogy. As part of our daily observation we see how after birth a child grows into adulthood by getting involved with the social and natural environment around her and learning continuously from both. A school is a place, which institutionalises this process of knowledge construction. A one-size-fits-all approach fails to cater to the diverse needs of learners. However, no system or approach is beyond limitation. Learner-centred pedagogy works well when the system is already in a position to implement it. Many countries and top schools in India have indeed become far more attractive as destinations of gainful education based on their reputation of pursuing learner-centred curriculum and pedagogy.

### 4.8 REFERENCES AND SUGGESTED READINGS


### 4.9 ANSWERS TO CHECK YOUR PROGRESS

1. Curriculum provides the framework for the educational process to take place. It covers all facets of education. It could also encompass the entire spectrum of education, though from a practical standpoint, it may be confined to a certain stage of education. Whereas syllabus is more specific in nature.
It provides a summary of topics meant to be covered in a certain stage of education, in a particular grade or a class, or in a given subject.

2. To ensure burden-free learning of the students; to develop critical analysis and understanding on the content studied; to utilise experiences of the learners for constructing knowledge; and also help the learners for development of complete personality. Last part of the question is self-exercise.

3. For example, in the domain of ‘Mathematics’, going beyond the narrow aim of developing useful capabilities relating to numeracy, it sets a higher aim of developing ‘the child’s resources to think and reason mathematically, to pursue assumptions to their logical conclusion and handle abstraction’ as ‘a way of doing things’ with ‘the ability and the attitude to formulate and solve problems’.

4. Integrated curriculum means connecting various curricular areas in such a manner that it becomes truly wholesome and far more enriching from a learner’s point of view. One way of doing it is to weave the curriculum around well designed themes. Last part of the question is self-exercise.

5. Curricular materials can be categorised in two heads. The first category includes textbooks, workbooks, laboratory manuals, etc. and the second category includes the materials such as dictionaries, atlases, supplementary books, grammar books, ‘do-it-yourself’ practice manuals, etc. Last part of the question is self exercise.

6. Like charts, graphs, tables, timelines, and tools of assessment like criterion-referenced and competency-based questions, study packages could also be considered as curricular materials.

7. Child-centred pedagogy means giving primacy to children’s experiences, their voices, and their active participation. This kind of pedagogy requires us to plan learning in keeping with children’s psychological development and interests. Last part of the question is self exercise.

8. To provide avenues and opportunities to the students to use their experiences to link and understand new concepts and that can help the students to construct their knowledge. Last part of the question is self-exercise.

9. Self exercise. Section 4.6.3 will help you to answer the question.