UNIT 9  TEACHING-LEARNING PROCESS IN ECONOMICS

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9.1 INTRODUCTION

Every human being does some activities which involve some forms of exchange for survival. Some exchanges involve money and many others do not. When we buy milk, we use money - currency and coins. It is common among farmers in India to exchange their labour by working on others’ farms. Economics is a social science which deals with the study of our society and human behavior involving a variety of these exchanges. In this unit, you will begin to know pedagogical dimensions of economics.

9.2 OBJECTIVES

After going through this unit, you will be able to:
• explain the term 'economics';
Teaching-Learning Process in Economics

9.3 ECONOMICS: NATURE, SCOPE AND METHOD

9.3.1 What Economics is About?

Social scientists define the term ‘economics’ in different ways. These definitions are not only controversial and not accepted by everyone but also keep changing. This is because economics is a subject which everyone wants to understand his or her own way. It is also due to complex nature of production and exchange systems prevalent all over the world. Economics is also the youngest subject among social sciences and is evolving over the last two and a half century.

Economics has different schools of thought and is deeply rooted in politics. We have classical, neo-classical, Keynesian, post-Keynesian, Marxist, Austrian, institutional, evolutionary and feminist schools of thought. Economists, who deal with the economic aspects, define and use the term, “Economics” based on the school they support and follow while doing economics.

Suppose you type ‘what is economics’, in Google search engine in the internet (https://www.google.co.in), the following text appears.

“the branch of knowledge concerned with the production, consumption, and transfer of wealth.”

American Economic Association, one of the world’s oldest association of economists provides the following as the definition of economics in their website (https://www.aeaweb.org/students/WhatIsEconomics.php):

“Economics is the study of how people choose to use resources.”

The website also presents definitions of three popular economists.


“What is the science which studies human behaviour as a relationship between given ends and scarce means which have alternative uses.” (Lionel Robbins, An Essay on the Nature and Significance of Economic Science MacMillan, London: 1932)

Economics is the “study of how societies use scarce resources to produce valuable commodities and distribute them among different people.”


What do you find common in these definitions? Economics is a social science which means the behavior of human beings in society is studied in this subject. Four major areas – production, distribution, consumption and exchange of goods and services form the scope of economics. The economic tools are applied in a wide variety of situations by economists. Economists are a group of social
scientists who study a variety of issues happening in the society. They study different aspects of economics – microeconomics, macroeconomics, fiscal economics, development economics, international trade, etc. This is similar to what is happening in other fields. Earlier most of the doctors we used to go for treatment were General Practitioners - doctors holding only M.B.B.S. degrees. Now when we go to hospital, we look for specialists – Orthopedics, Pediatricians and Cardiologists, etc. As more new activities emerge in the economy, the tasks of economists also become highly specialized. Earlier learning economics required learning history, logic, philosophy, now economics students study mathematics, computer programming, psychology, etc.

Check Your Progress 1

Note:  
  a) Write your answers in the space given below.  
  b) Compare them with those given at the end of the unit.  

1) Why is the word ‘scarcity’ emphasized in economics definitions?  
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2) Give two examples of transactions involving exchange.  
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3) Who are economists?  
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9.3.2 What Economists Do and how?

“Economics is what economists do” Jacob Viner, an economist said long ago. Working as an economist requires certain knowledge and understanding of economic theories and the functioning of economies. An economic theory is broadly defined as a “broad statement that embodies a meaningful relationship between observed economic events.” Economy is a hypothetical space in which we do works to produce and consume goods and services.
We buy vegetables from markets. Why prices of tomatoes, onion and others are not only different but also change daily? There are hundreds and thousands of goods and services sold and purchased in India whose prices are determined differently. How do we understand this? Suppose you produce a new commodity and wish to sell in the market. How do producers know how much to produce and at what price? Governments are required to understand the economic activities in their territories. How do they come to know about the demand, supply and price levels of commodities and services exchanged in different markets? Producers of goods and services also wish to predict the demand, supply and price levels like the way meteorologists forecast weather and rainfall. For this purpose, economists provide us with the Theory of Consumer Behaviour. This is an example of an economic model. When models become more popular and widely used, they become theories.

Every economic theory pertains to the general behaviour of groups and institutions because they reflect elements common to many specific situations. The economic theories do not purport to describe the behaviour of specific persons or institutions but they can frequently predict how a group reacts under a given set of circumstances. Economic theories also help us understand and make tentative statements about the behaviour of an economic system or economic events. For all these, economists use one assumption - ‘other things being equal’, to put it in popular Latin phrase, ceteris paribus. It is similar to controlled experiments done by physical and biological scientists.

R.G Lipsey and K.A Chrystal, two popular economics textbook authors suggest that each economic theory is based on certain logic and has specific form whose structure is built using concepts and assumptions. Learning economics requires understanding of these basic structures, concepts and assumptions of economic theories.

In recent times, economists use mathematics, statistics and logic to develop models. One well known economist A.C. Chiang says that building economic theories mathematically has the following advantages: (i) the ‘language’ used is more concise and precise; (ii) there exists a wealth of mathematical theorems at our service (for drawing conclusions on the basis of logical reasoning); (iii) it forces us to state explicitly all our assumptions as a prerequisite to the use of the mathematical theorems. This keeps us from the pitfall of an unintentional adoption of unwanted implicit assumptions; and (iv) it allows us to treat the general and variable case. However, a few economists all over the world are skeptical of Chiang’s view.

Not all assumptions are realistic in economics. Yet the models are based on such assumptions “open door to powerful insights” into the behaviour of the economic system or economic relationships. For instance, a perfectly competitive market form does not exist in reality. Yet we should understand its features and implications as it is the most efficient market structure. A deep understanding of perfect competition allows us to compare and contrast other market structures like monopoly, oligopoly, monopolistic competition, etc. in terms of price and output efficiency.

Economics contains technical terms or jargons. Lipsey suggests that these are required as “brevity of expression” and are essential as the subject grows and expands. Let us take a few examples. What is the meaning of the term, “eat”? It
is to “put food materials using our hands into mouth, eat and swallow it.” One word, ‘eat’ conveys the intention of 12 words. Technical terms help in understanding complex nature of economic systems. Words we use in our daily lives have different meaning in economics. For example, the term, “demand” may mean “to ask” in common parlance. In economics, it means “a consumer’s desire and willingness to pay a price for a specific good or service”. When several ideas are combined in a logical fashion in a model, the use of concepts and jargons becomes inevitable for precise expression.

Economists study the behaviour of human beings which can neither be controlled nor be predicted. This also means, we allow for a large element of unpredictability. Yet, we live in societies in which human beings behave mostly in an orderly manner. Economists use this orderly behaviour to generalise and predict many economic aspects and outcomes.

Learning economics requires understanding of economic phenomena - relationship between various economic aspects of an economy. For this, economists gather, measure and analyse economic information. Since people’s economic behaviour frequently manifests itself in measurable ways, the behaviour is coded and tabulated. They result in tables and large sets of numerical data which then are interpreted. These activities help to understand the dynamics of a particular economic phenomenon of the group of households or an enterprise but also lay the foundations for learning economics.

Economics contain some concepts and propositions about which we have to be careful while generalising about them. We know that saving is good for us. However, this is not good for the country as a whole. If all the people save, there will be shortage of goods and services and the economy will not grow. This is called ‘Fallacy of composition’. What is good for an individual need not be good for the whole economy. Similarly we should be careful in generalisation. For example, when an individual spends more than what she earns, she may go bankrupt. This does not mean that if the government is spending more than its revenue, it need not lead to loss. Rather it was proved that there is nothing wrong if the government spends more for the welfare of the people. This is called ‘False analogy’. We need to be careful on the sequence or the ‘cause and effect’ of economic events. Suppose the Government of India reduces taxes to increase employment and stimulate the economy. This leads to reduction in unemployment and a rise in the gross domestic product. We cannot conclude that tax reduction leads to India’s economic recovery. This might have gathered momentum prior to tax cut and it could have been merely coincidental. We need to look at all the factors holistically before coming to any conclusion.

**Check Your Progress 2**

**Note:**

a) Write your answers in the space given below.

b) Compare them with those given at the end of the unit.

4) How do economic theories help to understand society?

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### 5) Why are assumptions necessary in economics?
- Assumptions are necessary in economics to simplify complex economic situations and make them easier to understand.
- They help in formulating economic models and theories.
- Assumptions allow economists to solve problems in a systematic way.
- Without assumptions, the complexity of economic situations would make it impossible to draw meaningful conclusions.

### 6) Write two advantages of using mathematics in economics?
- Mathematics provides a precise and systematic way to analyze economic data and relationships.
- It allows economists to make accurate predictions and forecasts.
- Mathematical models help in understanding the behavior of economic agents.

### 7) List three important precautions in learning economics.
- Precaution 1: Always verify the data used in your analysis.
- Precaution 2: Be aware of the limitations and assumptions of the models you use.
- Precaution 3: Look beyond the numbers and consider the context in which economic indicators are presented.

### 9.4 Why Teach Economics: Curricular Objectives in Economics

Economics is taught in most countries including India from classes 6 to 10 as part of social sciences. At the higher secondary stage, it is taught as an optional subject.

Indians vote at 18 years, just after completing class 12. Every Indian citizen is expected to understand the economic life and changes happening around us. Since Independence, India has undergone tremendous changes on the economic front. In the initial years, governments, both central and state governments took initiative to set up large industries, built infrastructure such as roads, hospitals, schools, run transport services such as railways, airways and bus transport corporations and supported private sector by protecting them from foreign competition and ensured their survival and growth. In 1990s, this approach was changed. Private sector has been allowed to establish large scale industries. Government began withdrawing from many economic activities. Public sector companies are being privatized. India has one of the largest systems of private provisioning of services in the world. Many activities which were not sold earlier are now available in markets as services. For example, for long, government provided safe drinking water and now drinking water is sold for billions of rupees.
Scholars working in various fields and education policy documents provide the rationale for teaching various subjects in schools. For example, the National Curriculum Framework (NCF) 2005 brought out by the NCERT lists the following as the objectives of teaching economics for classes 9 and 10.

- To enable students to trace the chain of activities in which human beings are involved to make a living.
- To help students to understand the normative nature of economics and the role of economic policies in our lives.
- To enable students to know that economic problems can be and should be viewed from different perspectives.
- To equip the students in acquiring analytical skills and develop perspectives.
- To sensitise students from gender perspective.

In classes 11 and 12 students learn economics as an optional subject. Students are exposed to topics from microeconomics, macroeconomics, development economics and international trade, economic issues of India and states. The following are the objectives of teaching economics at this level.

- To help students understand some basic economic concepts and develop economic reasoning which they can apply in their day-to-day life as citizens, workers and consumers.
- To help students realise their role in nation building and sensitise them to the economic issues that the nation is facing today.
- To equip students with basic tools of economics and statistics to analyse economic issues.
- To develop an understanding so that they can present more than one view on any economic issue and argue logically with reasoning.

Many international boards offer economics courses in Indian schools. International Baccalaureate, for example, offers Diploma Programme in Economics equivalent to that of Indian higher secondary stage. It lists the following as the objectives of teaching economics.

- To encourage the systematic and critical study of human experience and behaviour; physical, economic and social environments; and the economics and development of social and cultural institutions
- To develop the capacity to identify, analyse critically and evaluate theories, concepts and arguments about the nature and activities of the individual and society.
- To enable students to collect, describe and analyse data used in studies of society; test hypotheses; and interpret complex data and source material.
- To promote an appreciation of the way learning is relevant to both the culture in which the student lives and the culture of other societies.
- To develop an awareness that human attitudes and beliefs are widely diverse and that the study of society requires an appreciation of such diversity.
- To enable students to recognize that the content and methodologies of economics are contestable and that their study requires the toleration of uncertainty.
The economics syllabus and textbook contents are based on these curricular goals. Teachers are expected to use curricular materials to help students realize these goals. For example, while teaching topics such as poverty, we need to help students use scientific methods to understand poverty, to critically examine the steps taken by the government to reduce poverty levels in the economy and to develop empathy with the poor. While developing the teaching plan, these objectives need to be stated both implicitly and explicitly.

Check Your Progress 3

Note:  
   a) Write your answers in the space given below.
   b) Compare them with those given at the end of the unit.

8) Why are objectives of teaching economics necessary?

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9) What are the differences between objectives of teaching economics of NCF 2005 and those of IB?

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10) The following table contains a list of topics in economics syllabus and curricular objectives. Match the topics with objectives. One objective can be considered for more than one topic as well.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Curricular objectives</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Food security</td>
<td>A) Understand economic policies</td>
</tr>
<tr>
<td>2) Privatisation</td>
<td>B) Understand basic economic concepts</td>
</tr>
<tr>
<td>3) Three Sectors of Indian economy</td>
<td>C) Understand various perspectives</td>
</tr>
<tr>
<td>4) Gross Domestic Product</td>
<td>D) Equip with basic tools of economics</td>
</tr>
<tr>
<td>5) Consumer Rights</td>
<td>E) Equip with basic tools of statistics</td>
</tr>
<tr>
<td>6) Poverty</td>
<td>F) Develop analytical skills</td>
</tr>
<tr>
<td>7) Factors of Production</td>
<td>G) Understand India’s challenges</td>
</tr>
</tbody>
</table>
9.5 TEACHING LEARNING METHODS IN ECONOMICS

Economics gives scope for teachers to bring in a variety of examples from our daily lives. Different approaches can be followed to teach economics topics.

9.5.1 Lectures

“Some people talk in their sleep. Lecturers talk while people sleep” said Albert Camus. Lecture, though criticised all over the world, is the predominant method teachers use to teach economics. Lectures are used to communicate a set of information to a particular group of audience. Teachers planning to deliver a lecture generally come with a set of notes – detailed or hints. This also means that teachers have to read the prescribed textbooks, refer to other materials, and takedown notes by prioritizing information – write them down one followed by the other using our own reasoning, what is to be spoken under each topic and sub-topic.

In colleges and universities, teachers take long time to deliver lectures. Teachers in schools have 35-45 minutes to deliver their lectures. Lecture method in schools mean teachers’ talk time is more than that of students. To avoid monotony during economics lectures, teachers encourage students to ask questions, bring newspaper clippings, reports, etc. other than textbooks to the classroom. These days, teachers use power-point presentations to deliver the lectures. PPT-based lectures save considerable time required for writing on the blackboard. Smart boards are also used to deliver lectures effectively. Students’ attention move between what is shown in the blackboard, LCD screen and teacher’s voice. Students also get a considerable amount of diversion in the PPT based lectures.

Two limitations of lectures are: (a) the teacher may not be able to give individual attention to students and (b) when lectures are long, students find difficult to pay attention to lectures.

9.5.2 Discussion

The National Curriculum Framework (2005) suggests that we need to connect textbook knowledge and syllabus with life outside classrooms and schools. Discussion is one important method to achieve the NCF 2005 goals. Many economics topics provide scope for students to share their lived experiences during discussion.

Discussion helps students to examine their own assumptions and knowledge critically. Teachers conducting discussion focus on students’ reasoning; point out common errors in the reasoning; and help them recognize simple and high-level reasoning. When considerable amount of issues are to be discussed by students, teachers identify students who can contribute with more details first and acknowledge them in the class rather than encouraging all students to speak. When students monopolise the discussion, teacher intervenes.

If the number of students is large in the class, teachers pair up them to discuss a question for five minutes and then bring them back for a whole-class discussion. This leads to each student’s participation and exposure to other students’ ideas. Some teachers also form two students groups for first discussion round and rotated
partners for every new problem or example. Another variant of this method is to use pyramid structure; in the first round two-students groups are formed; then four-student groups are formed to discuss the same issue and followed by eight-student groups. This can be done all the way up to the whole-class discussion. This format is useful if the topic has many levels of discussion. Generally more complex issues are discussed in small groups. In the whole-class groups, students can discuss their reactions, share their new ideas and build on each other’s views expressed during discussion.

In the whole class discussions, when students make a claim, teachers ask the evidence or logic and ask the whole class to evaluate it. They talk a little and encourage students who disagree to identify the source of disagreement. Teachers encourage students to talk to each other. They neither contribute on their own, nor take a stand. At times they encourage students to participate in the discussion.

Adolescent learners are at times emotionally charged while discussing an issue. If the teacher finds the discussion not manageable or unproductive, he/she needs to intervene. If it turns into a personal attack, the teacher can refocus the class and convert the discussion to reflect on the incident as a writing assignment.

### 9.5.3 Problem-based Learning (PBL)

In problem-based learning, economics teachers pose a problem to each group of students and facilitate them to find solutions. This was initially used in medical, healthcare and education sectors during 1960s and now widely used in other subject areas. The solutions students come out with and all the procedures they follow become part of their learning.

It should be noted that economic issues at the national level are not that simple to be solved by school students. Even for an individual, it may be challenging to find solutions. For example, a student finds her family having a very low income. She cannot easily find solutions to the family’s income needs as that requires parents to take up jobs with high income which may not be easy. Analyzing the problem and trying to understand its causes and consequences are more than sufficient. The PBL classrooms provide students opportunities to research a variety of materials; develop appropriate lines of enquiry so that they could come out with solutions. In this process, students come to know complexities involved in finding solutions, the need for understanding socio-historical, political and geographical issues. This approach is useful for courses on economic issues and not suitable for teaching theories.

### 9.5.4 Simulation Games in Economics

Simulation games bring students and teachers to understand economic theories using reality-show like situations. In simulation games, the students are involved as players and participate in the game actively. This require certain structural features – space to play, rules to be followed, materials to play the game, players, and so on. There could be some winners and losers in the game as well.

Simulation games are played to help students understand economic concepts. Economic concepts deal with a variety of economic activities performed by individuals or group of individuals. Economists evolve games simulating the reality situations. Game designers suggest the following steps to engage in a game.
Teaching-Learning Process: Specific to Subject Areas

i) Formulate learning objectives – which economic concept to be learned could be clearly recognised. In some games, more than one concept is involved. They also need to be listed.

ii) Plan the game which involves formulation of rules, formation of groups, number of students in each group, roles of individuals in each group, material required and arrangement of furniture etc.

iii) Role of teacher – though economics games do not usually require umpires like in physical games, teacher has to organise the whole game – plan in advance, estimate the time required, procure materials required, assign roles to each individual participating in the game, explain the rules to the players, write down the outcomes or results, intervene if there is any clarity required.

iv) Debriefing is generally done after the game is played. The teacher can then bring back students to the learning objectives and pose questions on the concept.

Internet contains many games and some of these games are also played online. These days simulation games such as MONOPOLY are also played by young children. Teachers can identify the game and modify depending upon the concept to be taught.

9.5.5 Learning through Concept Maps

We are generally interdependent. Social science concepts are required to understand the society in which we live. The relationship between concepts may be of different types. Concept maps help in organizing and depicting these relationships in the form of diagrams. In concept maps, concepts are enclosed in circles or boxes and the relationship between concepts are indicated by connecting line or cross link line. Words are specified on the connecting lines or cross link to describe the nature of relationships. Concept maps are represented in a hierarchical fashion with most inclusive general concepts at the top part of the map. The order of the hierarchy depends on the nature of relationship required to answer the question.

Look at the following concept map pertaining to a topic, National Income Accounting, in class 12.

The first requirement of a concept map is to develop question. This is followed by the identification and listing of concepts required to answer the focus question. While discussing the concept, students, by providing examples from real life and in textbook contents, suggest many more relationships between various concepts given in the concept maps. This helps them understand economic concepts better.
9.5.6 Projects

Economics gives considerable scope for assigning project activities to students. Project work requires in-depth investigation by the students under subject teachers’ supervision. It helps student in many ways even after completing the schools. Students study different topics in textbooks as part of the syllabus. Project work train students to learn to work on a particular economic question or issue they are interested in. They are required to think like an economist and do research – develop questions and questionnaire, collect and analyse data and investigate the particular economic question. Projects encourage students to learn to think critically. Projects give opportunity to apply skills they learn different subjects including mathematics and languages. Project works also help students to learn skills from outside classroom – using computers, talking to people to collect data and negotiate with team members. Teacher supervision on a continuous basis helps to acquire research skills. Students also develop communication and presentational skills which are beyond traditional examination system.

9.5.7 Field Visits

Economics teachers encourage field visits for different purposes as part of school curriculum. Topics such as banking, employment, agriculture, markets can be taught better using field visit. Field visits are also conducted to collect data from outside the school – households, shops, and other establishments. Field visits help students to understand how economic activities are performed.

9.5.8 Data Analysis and Interpretation

Questions arise in economics are understood and solved on the basis of data collected from households and firms. Look at Table 1. Data of this kind form the core of economics.

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<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Growth (%)</td>
<td>5.6</td>
<td>6.6</td>
<td>7.2</td>
<td>7.6</td>
</tr>
<tr>
<td>Growth of electricity Generation (%)</td>
<td>4.0</td>
<td>6.0</td>
<td>8.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Fiscal Deficit as a % of GDP</td>
<td>4.9</td>
<td>4.5</td>
<td>4.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Export Growth (%)</td>
<td>-1.8</td>
<td>4.7</td>
<td>-1.3</td>
<td>17.6</td>
</tr>
<tr>
<td>Export Growth (%)</td>
<td>0.3</td>
<td>-8.3</td>
<td>-0.5</td>
<td>-15.5</td>
</tr>
</tbody>
</table>


Economics students are expected to understand how this kind of data is collected and what this data depict about the economic development. Economic data are of different kinds – cross sectional data, time series data, qualitative and quantitative and so on. Data analyses include use of statistical tools to understand and arrive at conclusions about economic aspects. Data analysis helps students in understanding the economic phenomenon given in the form of numbers, summarises the data, identifies and establishes relationship between different economic aspects, compares various economic variables. While teaching economics teachers use a variety of economic data, analyse them and interpret the findings.
9.5.9 Peer and collaborative methods

In these methods, students are given more autonomy to learn economics. These methods view that knowledge is social construct and teachers help students to bring out knowledge from themselves. In collaborative learning method, students in small groups discuss concepts pertaining to a particular economic issue and find solutions or develop understanding. Peer learning, one form of collaborative learning method, requires student of similar age and grade work with other students in understanding of concepts.

9.5.10 Document analysis

Though this activity is predominantly used in subjects such as history, in recent times students are expected take up this activity to explore official documents such as Economic Survey, Census of India, Human Development Report, and Budget Reports and so on. Many of these reports are published annually. Economics students get the first person insight into economic data in these reports.

Check Your Progress 4

Note:  
a) Write your answers in the space given below.
    b) Compare them with those given at the end of the unit.

11) How are lectures different from discussions?

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12) The table contains few economics topics. Fill up the appropriate method you will use to teach these topics?

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<thead>
<tr>
<th>Sl. No.</th>
<th>Topic</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Theory of Demand</td>
<td></td>
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<tr>
<td>2</td>
<td>Estimation of GDP</td>
<td></td>
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<tr>
<td>3</td>
<td>Index Numbers</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Measurement of Poverty</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Globalisation</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Consumer rights</td>
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</table>

13) Field visits are useful only for subjects such as history. Do you agree with this statement? Explain.

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9.6 TEACHING LEARNING RESOURCES

9.6.1 Textbooks

Textbooks are the major source of teaching-learning material for a majority of students and teachers in India. Economics textbooks are different from other subject textbooks. They provide learners basic understanding of concepts. Textbooks are different from guidebooks which provide only answers to questions. Textbook contents are organised and presented keeping in view of the subject requirements, learners’ age, grade and cognitive abilities. Textbooks recommended by examination boards or written by government agencies are used as benchmark for examination purposes. Questions in Board examinations and answers by examinees are verified on the basis of what is given in textbooks. Textbooks work as benchmark for teachers. For example, the economics syllabus may include topic ‘development’, but millions of pages have been written on this topic and available for teachers. A textbook chapter with 15-20 pages on the topic help teachers how much to be taught.

9.6.2 Supplementary Reading Materials

Economics textbooks may contain topics from different areas. Any economics textbook, covering a large number of theories and topics, can provide only basic framework for understanding a limited number of concepts or topics. Supplementary reading materials help students and teachers who wish to know more about the topics. Books published by government agencies such as National Book Trust (NBT), New Delhi and other private publishers are some examples (See also Suggested Readings).

9.6.3 Charts, Diagrams and Graphics

Economic statistics is one of the major source of learning economics. They are mainly available in the form of large tables. Since students can understand any content in the form of visuals much better than the tables containing so many numbers, economics teachers using knowledge of statistics convert these into different charts. Look at the Figure 9.1.

![Figure 9.1: Key Indicators of Indian Economy, 2012-16](image-url)
Teaching-Learning Process: Specific to Subject Areas

You will notice that charts help not only to know the data but also help to interpret the data. In order to present economic information to learners, computer software is used to develop this kind of charts which form of part of graphics.

9.6.4 Newspaper, Radio and Television

Economic information on economic activities of governments and private organisations are mainly available in newspapers, radio and television. For example, when union government plans and presents budgets every year, all the media widely cover the details of priorities of government and its economic policies. Media also report the performance of various private companies as people have invested their savings in stock markets. Teachers by guiding students to read, watch and collect the economic information and connect textbook concepts with in real life economics.

9.6.5 Multimedia materials

For a very long time, cinema and media were the major source of additional information for students. The revolution in the information and communication technologies led many government and private organisations coming out with CDs, DVDs on specific economics contents. For example, the Central Institute of Educational Technology, New Delhi brings out such multimedia materials for use in classroom. Individual media houses also publish multimedia materials.

9.6.6 Internet

It may not be over-exaggeration if one says that almost all the global knowledge for learning economics is available in internet. Important writings of economists during the last 250 years are available in digital form. Most textbooks are now published as hard and soft copies. Internet has become a major source of learning economics. Internet not only contains text materials but also multimedia materials, lectures and talks by economists. All the economic policy documents are available in the internet. Statistics and reports of government agencies are available in the internet. Most private companies provide their details in the internet. In fact, economics teachers role become crucial to help students recognize authentic knowledge available in the internet.

Check Your Progress 5

Note: a) Write your answers in the space given below.

b) Compare them with those given at the end of the unit.

14) Why are textbooks important?

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15) How are textbooks different from media?
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16) List three reasons for watching television to learn economics.
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17) Distinguish between supplementary reading materials and textbooks.
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9.7 LET US SUM UP

Economics is defined by economists in different ways depending upon their belief systems. Important aspects in-built in these definitions are production, consumption, distribution, and exchange. Learning economics require careful reading of various economic models. These models are based on a few assumptions and built using mathematics. Teachers need to be careful of three aspects in economics viz., false analogy, fallacy of composition and cause and effect relationship between economic aspects. The curricular objectives are closely related to national goals of India and global citizenship. Teachers depending upon the topic can choose teaching methods. Since economics is dealing with many aspects of our daily life, media, besides other teaching learning materials can improve our understanding of economics.

9.8 SUGGESTED REFERENCES AND READINGS

Teaching-Learning Process: Specific to Subject Areas

- *Business Newspapers*
- *Business Magazines*
  *Economic and Political Weekly*
- *Business Television Channels*
- *Websites*
  - www.india.budget.nic.in
  - www.nitiaayog.gov.in
  - http://nroer.gov.in
  - https://ideas.repec.org/
  - https://ruralindiaonline.org/
  - http://www.econlib.org
  - www.economicsnetwork.uk
  - http://serc.carleton.edu/econ/index.html
  - http://www.tutor2u.net

9.9 ANSWERS TO THE CHECK YOUR PROGRESS

1) Resources required for production of goods and services are not plenty.
2) (a) labourers working on others’ fields for remuneration; (b) buying pen and pencils in a stationary shop by making payment
3) Social scientists who study about production, distribution, consumption and exchange using models and theories.
4) Economic theories help to understand relationship among various economic events and factors operating in the society.
5) Assumptions are conditions for understanding the functioning of set of economic factors. They help in recognizing set of behaviours of economic systems among others.
6) (a) language used is more precise and concise; (b) helps in drawing conclusions based on logical reasoning.
7) (a) false analogy; (b) fallacy of composition; (c) recognize the cause and effect relationship among economic events.
8) They work as national goals every country wish to achieve. Objectives are also required to develop syllabus and textbooks and organize curricular activities.

9) NCF 2005 objectives discuss mainly the national development goals whereas IB objectives intend to develop global citizenship and learning to live within the nation as well.

10) 1- A & G; 2 – A & C; 3-B & F; 4 – B; 5 – C & G; 6 – A & G; 7 – B & F

11) Lectures involve teaching to talk more whereas in discussions, teachers facilitate students to share their views.

12) 1& 2 - Lectures; 3 – Lectures and discussion; 4 – Problem based learning and projects; 5 – Discussion; 6 – Problem based learning and projects

13) No. Economics also provides students scope to observe economic aspects at workplace, banks, factories, shops and other places. Students can talk to people engaged in various economic activities to understand economic life.

14) Textbook contents work as benchmark knowledge for teachers. Examinations are based on textbook contents.

15) Textbooks provide basic idea about concepts pertaining to a specific subject area. Knowledge acquired through media supplement the basic knowledge introduced through textbooks.

16) (a) increase our economic understanding; (b) update of what is happening in economic front; (c) develop sensitivity towards economic issues

17) Textbooks provide only basic idea of specific concept or economic issue. Supplementary reading materials increase our understanding of those basic issues studied in textbooks as part of classroom learning activity.