

## STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES. CASE STUDY: MAHARASHTRA STATE, INDIA

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### **Abstract**

*The introduction conveys some data on learning in India and on designing Geography textbooks in this country. The present paper is reliant on four Geography textbooks, ranging from the 9th to the 12th grade. As regards each textbook, the study considers their learning units, then analyses their structure, the unitary way of designing them, the components of the panels of authors, the texts, illustrative materials, drills, learning activities, language, the wealth of Geography lexis, and the glossary.*

**Keywords:** curriculum, Geography textbooks, learning activities, India, interdisciplinary approach

### **INTRODUCTION**

The Board for Secondary Education has proposed a Curriculum for Secondary Learning based on the National Curriculum for School Education 2005 (NCF, 2005) and on the National Curriculum Framework of the National Curriculum 2010 (SCF, 2010).

The National Curriculum for School Education 2005 (NCF, 2005) is the fourth national frame of the curriculum designed by the National Board of Formative and Educational Research in India, the others being published in 1975, 1988, and 2000. This official paper focuses on an overlapping structure of education in the first 10 school years, on an integrated approach of social sciences and of sciences, as well as on a new marking scheme system. This official paper is aimed at India's educational system in its entirety, but only half of India's states have managed to implement it. In

India, there are variations regarding the amount of working days, the time allotted to teach a certain subject, the assessment of the learning levels, the time destined to the annual assessment.

The State Board of Education has spotlighted the study of geography within social sciences, accounting for enticing more students' inquisitiveness and prowess. The geography textbooks typical of Secondary Education are based on NCF 2005 and on SCF 2010. At domestic level, there are various school syllabi: school syllabi elaborated by the Central Board of Secondary Education (CBSE) for students aged up to the 12th grade, school syllabi enabling the obtaining of the Indian Certificate for Secondary Education (ICSE) and the Certificate for Indian School (ISC).

The CBSE Syllabus is a more comprehensive one than the ICSE, the content of each being logically related. The themes are gradually inserted only to come under more thorough study in the following year. The ICSE syllabus aims at secondary education performed in English and is undertaken primarily by those who intend to pursue university studies abroad. Within the syllabus, are included basic elements which recur, then it upgrades to a superior level. Projects are emphasized to the extent to which, by their fulfilment, it is deemed to provide students with a basis for achieving high performance.

A CBSE exam requests a good preparation of the students, chiefly because punctual relevant answers are demanded. Admittance exams at the end of the 10th and the 12th grade bank entirely on the CBSE syllabus. For a child in India, who completes Middle School (5th-7th grades), High School (8th-10th grades), and Junior College (11th-12th grades), it is easier to adjust to the pattern of those exams because the textbooks comprise themes whose contents is checked only by means of these exams.

In the 9th and the 10th grades, in India, students learn Regional Geography, Geography and Economics, Geography of Maharashtra (9th grade) and Geography of India (10th grade). In Junior College, students learn General Geography: Physical Geography (11th grade) and Human Geography (12th grade). For the 12th grade, there is also a textbook of Practical Geography.

The syllabus for the 9th grade is designed as to represent a prominent link within the chain of the curricular offer. Up to the 10th grade, it is undertaken general education, only for students to proceed furthermore with thorough study of some fields of interest for them, considering their prospective career. With the 11th and 12th grades they broaden and deepen knowledge, so that students are enabled to use the adroitness and competences of the respective field both in daily situations, as well as in the domains of their profile.

The textbooks ranging from the 8th to the 10th grades (High School) and for the 11th and the 12th grades (Junior College), which we analyse, have been designed under the aegis of the Board for Education in Secondary and Higher Secondary Education of Maharashtra by a Board of

Editors for Geography, which is under the guidance of a Board of Studies, and have been edited by Maharashtra State Bureau of Textbook Production and Curriculum Research. The textbook *Practical Geography* has been issued under the aegis of the National Council of Education Research and Training in New Delhi.

In this paper, we shall present an analysis of the textbooks for the 9th and the 10th grades for High School and those for the 11th and the 12th grades for Junior College. The textbook for 8th grade was analysed by Cîineanu (2016) in a different study. The authors of each textbook possess different competences, as they have various jobs – professors, geographers, cartographers, economists, photographers, pedagogues, teachers with experience, and proofreaders.

Each textbook comprises more aspects: excerpt from the Indian Constitution, Pledge, The anthem, Foreword, Introduction, maps, lessons, and Glossary. The size of textbooks is the following: length 28 cm, width 21 cm (approximately as an A4 page).

## **ANALYSIS OF THE 9<sup>th</sup> GRADE TEXTBOOK**

The Maharashtra State Department for Education at higher and secondary level elaborated the *Frame of Study* in 2010, having as benchmark the *National Curriculum Framework, 2005*. Owing to this frame, geography is included in the social sciences, these ones being twofold. Part I consists of History and Political sciences, whilst Part II comprises Geography for Section A and Economics for Section B.

The 9<sup>th</sup> and 10<sup>th</sup> grades suggest for learning an array of regional themes referring to the natural resources, occupations, agriculture, industry, transport, means of communication and tourism, population, regional development, and practical geography. Likewise, the influence of the environment upon the state's development is studied.

Introducing the economics and its basic concepts aims at each student understanding the revenue and consumption within the family. In chapters as Income, Needs, and Family Budget, there have been considered the age particularities and students' prior knowledge and were introduced so as to help students acquire certain skills in daily contexts.

This textbook addresses activities by means of which students are acquainted with applying geography knowledge in everyday life and develop their geographic thinking and creativity. "*By browsing the drills and field work from the chapters proper to Practical geography, students learn to directly and indirectly observe and grasp environmental problems and the concepts of general geography. By solving drills of map observing and reading, students enhance their thinking abilities and individual study*"

(2013, the seventh unnumbered page). In designing this textbook, there were taken into account the newest informational standards and were used reference books, information from the internet, coloured maps, photos, and schemes. This textbook was revised by renowned geographers, economists, experienced teachers, and educators. For issuing this textbook, there contributed the members of the Board who deal with geography and economics studies, authors of geography and economics textbooks, cartographers, and photographers.

*Geography and Economics, Standard IX – Social Science, Part 2* (2013) textbook comprises 54 pages. It opens with an excerpt from the Indian Constitution – the same as for the 10<sup>th</sup> and the 12<sup>th</sup> grades, it continues with the national anthem in Hindi, then followed by Plead, Introduction, Contents, maps, lessons, and bibliography.

(1) In Foreword, are conveyed the desiderata of the Indian people. We present an extract from the Indian Constitution in order to spotlight the values that are promoted among students:

*"We, the people of India, bearing as solemn duty constituting India as a socialist secular democratic and sovereign Republic and ensuring for all our citizens: social, economic and political Justice; Freedom of thought, of expression, of faith and of religion; Equality of status and chance; Fraternity to ensure the individual's dignity and the nation's unity and integrity. In this constituent gathering, on this day, 26<sup>th</sup> November 1949, we approve, enact and make known this Constitution for us ourselves."* (2013, the third unnumbered page).

(2) India's national anthem is an anthem of glory dedicated to Mother India, deemed as a goddess. The inclusion of the anthem in each textbook is intent on fostering in students feelings of love and devotion towards their country.

*"Thou art the rulers of the minds of all people,  
dispenser of India's destiny.  
Thy name rouses the hearts of Punjab, Sind, Gujarat and Maratha,  
Of the Dravida and Orissa and Bengal;  
It echoes in the hills of the Vindhya and Himalayas,  
mingles in the music of Yamuna and Ganga and is chanted by  
the waves of the Indian Sea.  
They pray for thy blessings and sing thy praise.  
The saving of all people waits in thy hand,  
thou dispenser of India's destiny,  
Victory, victory, victory to thee."*  
(2013, the fourth unnumbered page).

(3) The *Plead* forwards the feelings and beliefs that any Indian youngster ought to nurture towards one's country, people, parents, teachers, and all elders. Owing to this plead, the national identity is shaped and the students are well aware of their belonging to a community.

*"India is my country. All Indians are my brothers and sisters. I love my country and I am proud of its wealthy and varied legacy. I shall do all my best to be proud of it.*

*I shall give respect to my parents, teachers and to all elders and I shall revere everyone.*

*To my country and my people, I pledge my devotion. In their well-being and prosperity alone lies my happiness."* (2013, the fifth unnumbered page).

(4) *Contents*. The 9<sup>th</sup> grade textbook features studying the *Economics and Geography of Maharashtra region – basic notions*. The Table of contents illustrates the topics and corresponding pages:

A. Geography

1. *The concept of region – pp. 1-8*
2. *Maharashtra – natural resources – pp. 9-21*
3. *Maharashtra – jobs – pp. 21-28*
4. *Maharashtra – agriculture – pp. 29-37*
5. *Maharashtra – industry – pp. 38-42*
6. *Maharashtra – transport, communications and tourism – pp. 43-45*
7. *Maharashtra – population – pp. 52-58*
8. *Maharashtra – regional development – pp. 59-66*
9. *Practical geography – pp. 67-71*

B. Economics

1. *Introduction to Economics – pp. 75-78*
2. *Basic concepts of economy – pp. 79-82*
3. *Income sources – pp. 83-89*
4. *Family budget – pp. 90-93*

(5) *Presentation of topics*. We have analysed the following aspects: the length of the texts, the structure of the lessons, the materials associated with a certain topic, the geographic words in the textbook and the lexis explained in the *Glossary*. At the end of each theme, there are included four drills and an activity or a project based on two-three sub-points. Each lesson spans along 3-6 pages approximately (Table 1).

STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

Concerning the lessons in the chapter on *Economics*, each bears a *Glossary* of 5-6 terms at the end.

**Table 1.** Length of the topics in *Geography Standard IX*

Topic	Geography									Economics			
	1	2	3	4	5	6	7	8	9	1	2	3	4
Number of lines in a text	127	195	149	108	80	183	99	94	123	48	63	112	45

*Lesson structure:* Some lessons are arranged according to numbered items (1, 8), others in themes and sub-themes bulleted lists (2, 3, 4, 5, 6, 7, 9). At the debut of each lesson, there are specified learning objectives and learning outcomes, these being important in guiding the students along the learning process.

**Table 2.** Section A: *Geography (2013)*

<i>Topics to learn</i>	<i>Learning Outcomes</i>
<i>Chapter 1 (2013, p. 1)</i>	
1. <i>The concept of region</i>  1.1. <i>Region identifying factors</i>	1. <i>What does region mean?</i> 2. <i>What is a natural factor?</i> 3. <i>What is an economic factor?</i> 4. <i>How do you identify a region?</i> 5. <i>Localising and the span of Maharashtra.</i> 6. <i>The maps which include regional data.</i>
<i>Chapter 2 (2013, p. 9)</i>	
2. <i>Natural resources</i>  2.1. <i>Land resources and usage of soils</i> 2.2. <i>Resources of hydrosphere</i> 2.3. <i>Resources of soil</i> 2.4. <i>The woods and fauna</i> 2.5. <i>Mineral resources</i>	1. <i>Presentation of natural resources</i> 2. <i>Information on Maharashtra land usage</i> 3. <i>Water availability, usage and pollution</i> 4. <i>Importance of water preservation</i> 5. <i>Various types of soil</i> 6. <i>Information on soil protection</i> 7. <i>Types of woods and the prominence of woods</i> 8. <i>Protection of woods and animals</i> 9. <i>Mineral distribution</i> 10. <i>Need of mineral preservation</i>

<i>Chapter 3 (2013, p. 22)</i>	
<p><i>3. Occupations</i></p> <p><i>3.1. Primary occupations</i></p> <p><i>3.2. Secondary occupations</i></p> <p><i>3.3. Tertiary occupations</i></p> <p><i>3.4. Quaternary occupations</i></p>	<p><i>1. Job classification</i></p> <p><i>2. Definition and variety of job titles</i></p> <p><i>3. Features of varied jobs</i></p> <p><i>4. Industries that are based on various occupations</i></p> <p><i>5. Job importance in human life</i></p>
<i>Chapter 4 (2013, p. 29)</i>	
<p><i>4. Agriculture</i></p> <p><i>4.1. Types of agriculture</i></p> <p><i>4.1.1. Intensive agriculture</i></p> <p><i>4.1.2. Irrigated agriculture</i></p> <p><i>4.1.3. Horticulture</i></p> <p><i>4.2. Major cultures: wheat, rice, sugar cane, cotton, mango, oranges, bananas</i></p>	<p><i>1. Prominence of agriculture</i></p> <p><i>2. Main types of agriculture in Maharashtra</i></p> <p><i>3. Main crops and their distribution in Maharashtra</i></p> <p><i>4. Main fruits and their distribution in Maharashtra</i></p> <p><i>5. Learn data on produce distribution using the map</i></p>
<i>Chapter 5 (2013, p. 38)</i>	
<p><i>5. Industry</i></p> <p><i>5.1. Industry based on the processing of agriculture produce</i></p> <p><i>5.1.1. Cotton textiles</i></p> <p><i>5.1.2. Sugar industry</i></p> <p><i>5.2. Other industries</i></p> <p><i>5.2.1. Chemical industry</i></p> <p><i>5.2.2. Automotive industry</i></p> <p><i>5.2.3. Electro technical industry</i></p> <p><i>5.3. Industrial pollution</i></p>	<p><i>1. What does industry mean?</i></p> <p><i>2. Industry classification</i></p> <p><i>3. Industry based on agricultural produce</i></p> <p><i>4. Mineral-based industry</i></p> <p><i>5. Distribution of industry</i></p> <p><i>6. Causes of industrial pollution</i></p>
<i>Chapter 6 (2013, p. 43)</i>	
<p><i>6. Transports, communications and tourism</i></p>	<p><i>1. Importance of transports</i></p> <p><i>2. Types of transport</i></p> <p><i>3. Advantages and disadvantages of varied</i></p>

STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

<p>6.1. <i>Transports</i></p> <p>6.1.1. <i>Roads</i></p> <p>6.1.2. <i>Railways</i></p> <p>6.1.3. <i>Airways</i></p> <p>6.1.4. <i>Seaways</i></p> <p>6.1.5. <i>Pipes</i></p> <p>6.2. <i>Means of communication</i></p> <p>6.2.1. <i>Post and telegraph</i></p> <p>6.2.2. <i>Telephone</i></p> <p>6.2.3. <i>Radio</i></p> <p>6.2.4. <i>Television</i></p> <p>6.2.5. <i>Internet</i></p> <p>6.3. <i>Tourism</i></p>	<p><i>means of communication</i></p> <p>4. <i>What does communication mean?</i></p> <p>5. <i>Means of communication</i></p> <p>6. <i>Importance of the ways of communication</i></p> <p>7. <i>Chief tourism centres in Maharashtra</i></p>
<p><i>Chapter 7 (2013, p. 52)</i></p>	
<p>7. <i>Population</i></p> <p>7.1. <i>Population growth rate</i></p> <p>7.1.1. <i>Density</i></p> <p>7.1.2. <i>Spread</i></p> <p>7.2. <i>Population structure</i></p> <p>7.2.1. <i>Genre structure</i></p> <p>7.2.2. <i>Age structure</i></p> <p>7.2.3. <i>Literacy</i></p> <p>7.3. <i>Migration of population</i></p>	<p>1. <i>Prominence of population as resource</i></p> <p>2. <i>Population growth and distribution</i></p> <p>3. <i>Density and migration of population</i></p> <p>4. <i>Information on population structure</i></p> <p>5. <i>Information about genre structure and literacy in Maharashtra</i></p>
<p><i>Chapter 8 (2013, p. 59)</i></p>	
<p>8. <i>Regional development</i></p> <p>8.1. <i>The concept of development</i></p> <p>8.2. <i>Regional development</i></p> <p>8.3. <i>Human development –</i></p>	<p>1. <i>What does regional development mean?</i></p> <p>2. <i>The concept of human development – INDEX</i></p> <p>3. <i>Factors which determine human development – INDEX</i></p> <p>4. <i>Human development – INDEX Maharashtra</i></p>

<i>INDEX</i>	<i>5. What does regional imbalance mean?</i>
<i>8.4. Regional development in Maharashtra</i>	<i>6. Causes of regional imbalance</i>
<i>Chapter 9 (2013, p. 67)</i>	
<i>9. Practical geography</i>	<i>1. What does cartography mean?</i>
<i>9.1. Cartography</i>	<i>2. The nature and domain of cartography</i>
<i>9.2. Maps</i>	<i>3. Understand the following aptitudes: reading a map, elements of a map, preparing the isopleths' map, collecting data using acquired knowledge, and giving a presentation</i>
<i>9.3. Field work</i>	

**Table 3.** Section B: Economics/Indian Economic Development (2013, p. 73)

<i>Topics to learn</i>	<i>Learning Outcomes</i>
<i>Chapter 1 (2013, p. 75)</i>	
<i>1. Introduction to economics</i>	
<i>1.1. Economic progress of human being</i>	
<i>1.2. Meaning and definition of economy</i>	<i>1. Stages of man's economic development</i>
<ul style="list-style-type: none"> <li>• <i>Adam Smith</i></li> <li>• <i>Prof. Alfred Marshall</i></li> <li>• <i>Lionel Robbins</i></li> </ul>	<i>2. Meaning and definition of economics</i>
<i>1.3. Importance of the study of economics</i>	<i>3. Need and importance of the study of economy</i>
<ul style="list-style-type: none"> <li>• <i>Intellectual value</i></li> <li>• <i>Practical aim</i></li> <li>• <i>Governmental organisations</i></li> </ul>	
<i>Chapter 2 (2013, p. 79)</i>	
<i>2. Basic notions of economics</i>	<i>1. Meaning of human needs</i>
<i>2.1. Introduction</i>	<i>2. Characteristics of human needs</i>
<i>2.2. Human needs, meaning, characteristics and classification</i>	<i>3. Classification of human needs</i>
<i>2.3. Goods</i>	<i>4. Economic and non-economic goods</i>
	<i>5. Infrequency of resources</i>
	<i>6. The concept of utility</i>
	<i>7. The concept of value and price</i>

STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

<p>2.4. Resources</p> <p>2.5. Utility, value and price</p> <p>2.6. Demand and offer</p>	<p>8. The notion of demand and offer</p>
<p>Chapter 3 (2013, p. 83)</p>	
<p>3. Income sources</p> <p>3.1. Introduction</p> <p>3.2. The definition of personal income</p> <p>3.3. Income sources</p> <p>3.4. What does "Baluta" system mean?</p> <p>3.5. Industry of processing agricultural produce</p> <p>3.6. Modern sources of income</p>	<p>1. The role of personal income</p> <p>2. Sources of personal income</p> <p>3. "Baluta" and "Aluta" systems in agriculture</p> <p>4. Light industry and handicrafts</p> <p>5. Modern income sources and handicrafts</p>
<p>Chapter 4 (2013, p. 90)</p>	
<p>4. Family budget</p> <p>4.1. Introduction</p> <p>4.2. Types of budget</p> <p>4.3. The value of the family budget</p> <p>4.4. Components of the budget</p> <p>4.5. Examples of family budget</p>	<p>1. The notion of income and expenditure</p> <p>2. Monthly family budget</p> <p>3. Preparing monthly budget with parents' help</p>

*Illustrative material.* At the beginning of the textbook, there are 4 maps. Maharashtra Administrative Map, Maharashtra State Physical Map, the Map of the Great Hydrographic Basins of Maharashtra, and the Map of the Major Transport Routes in Maharashtra. A lesson of the textbook features a diversity of illustrative material. The maps, images and tables prevail over the texts of the lessons which therefore favour the understanding of data and enable the design of some practical drills. The maps and drawings in the textbook are representative and accurate. The maps are not satiated with information and represent the region of Maharashtra accurately.

For instance, with *Theme 3 - Occupations*, there are included: a collage of pictures on the main occupations from the primary, secondary, tertiary and quaternary sectors; six pictures about fishing, Khanari cow, Khilari bull, Calf, an ostrich farm, and mining. There is the Map of occupations in Maharashtra state in which it is conveyed the percentage of the sectors of activity for each district of Maharashtra state. This lesson hosts a scheme of the classification of the sectors of activity. There are

introduced less-known facts about fishing, indigenous bovine breeds, contribution of the IT sector and of technology and services based on information.

The load of geography terms. For *Theme 2 – Natural Resources*, there are 129 terms of Physical Geography: land, nature, water, soil, woods, biosphere, surface, relief, slope, physical map, hydrography, province, steep, forest, rivers, occidental/western, West, weather, East, coastlines, drought, bumps, environment, afforestation, torrential rains, swamp, floods, physical conditions, monsoon conditions, surface conditions, depth conditions, river bed, lakes, reserves, basalt, infiltrations, dykes, hill, river basins, excavations in the ground, artificial canals, conservation, drainage, soil conservation, vegetation, meadow, ecosystem, discharge, rocks, organic matter, biodiversity, erosion, degrading, black soil, flooding valleys, silt, texture, North, red soils, yellow soils, granite, gneiss, metamorphic rocks, soil conservation, vegetation, meadow, deforestation, excessive grazing, ploughing towards the direction of the slopes, habitat, plants, global warming, climate changes, tropical forests, deciduous, mangrove, coconut, the sacred tree, ebony tree, shrubs, cactuses, baobab, subduction, estuaries, wild animals, tiger, cheetah, bison, crocodile, elephant, antelope, giant squirrel, centre, carbon, hydrogen, limestone rocks, North-West, fuel, thermal energy, artificial rubber, exhaustible traditional resources, lifestyle, chrome, copper, sodium, mercury, oxygen, Titan, magnetite, iron, potassium, limestone, aluminium, phosphorous, salt, hematite, magnetite, limonite, siderite, bauxite, minerals, carbon, anthracite, lignite, pit coal, bituminous, peat, carbon, hydrogen (2013, pp. 9-20).

There are 86 terms of *Human Geography*: resources, ore, industries, gases, transports, state, mining, regions, urban, agriculture, settlements, diagram, land use, cultivate regions, irrigations, population, district, dwellings, constructions, industrialization, fallowing, permanently uncultivated land, current uncultivated areas, technology, farmers, global trade market, social and cultural changes, tap water, renewable, canals, pipes, cisterns/irrigation basins, irrigations by means of surface pumps, sprinkling irrigations, irrigations, pollution, compost, waste, dredging, non-renewable resource, cotton, sugar cane, wheat, sorghum, vegetables, lateritic soil, fertilisation, rice, horticulture, silted soils, hazelnuts, potatoes, millet, excessive grazing, ploughing in the direction on the slopes, soil degrading, biotic resource, economic sectors, solar energy, biogas, forestry, project, Marathi, Hindi, metallic, non-metallic, electronics industry, stainless steel, railways, automobiles, petrol refining, chemical industry, steel industry, manganese, alloys, kaolinite, photographs, matches industry, energy resources, mines, fuel, thermal energy, artificial rubber, traditional exhaustible resources, lifestyle. These notions highlight an interdisciplinary and transdisciplinary approach of the themes, as well as respecting the principle of the integration of geographic elements in studying processes and phenomena.

## STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

There are 61 *proper names*: Maharashtra, The Ghats, Tapi, Godawari, Wordha, Konhan, Wainganga, Bhima, Krishna, Vidharba, Sindhudurg, Raigad, Thone, Gadchiroli, Chandrapur, Bhandara, Gondia, The Western Ghats, Nasik, Pune, Satara, Sangli, Kolhapur, Kharland, Bhandarei, Ahmednagar, Pune, Satara, Osamanabad, Dhule, Ratnaguri, Purma, Nagpur, Bhadara, Arjun, Santhal, Sindhudurg, Thane, Satar Kanchan, Masik, Mandurbar, Amarovati, Akola, Khair, Korphed, Kandalul, Tiwarul, Melghat, Tadola, Pench, Sahyadri, Dajipur, Shekaru, Bhimanshankar, Raigarh, Koradi, Paros, Turbte, Yevatamal, Mumbai, and the Arabian Sea.

*Drills associated with the maps*: Within each theme of the textbook, there is a selection of drills and by such practice students learn how to analyse and interpret the content of the maps and to position themselves with these ones' help and to grasp the geographic space. Inside the textbook, there are also tasks addressing various projects for students.

We further present several learning activities from *Theme 9 – Practical (Practical Geography)*:

*Activity 1*. Students visit a village where they can study the population, occupations, and transports and may ask villagers some questions. During this field-work like activity, the students are acquainted with inquiring into a problem typical of geography. The textbook reveals a sample-quiz which may be employed by students:

1. How many members are in your family?
2. What is the name of the head of the family?
3. How many members of your family have studies?
4. How much land does your family cultivate?
5. What do you cultivate in this area?
6. Which are the main basic cultures in your village?
7. What types of irrigations are used in agriculture?
8. What types of fertilisers are employed in agriculture?
9. Which is the closest store where you can sell your agricultural produce?
10. Where do the people with studies in your family work and what sort of activities do they perform?
11. Apart from agriculture, what other activities are undertaken in your village?
12. Which is the nearest settlement?
13. What types of transport do you have in your village?
14. Which is the car frequency in your village?
15. Up to what grade do they learn in your village?

16. Which is the source of drinkable water?
17. Is your house connected to electricity?
18. What cultural activities do you perform in your village?
19. What other facilities do you enjoy in your village?
20. As far as you are concerned, what facilities and amenities does your village need? (2013, p. 71)

*Activity 2.* Students analyse a map based on a study guide, discover which are the methods employed for elaborating maps and deduce the significance of maps in representing the geographic space.

1. Which are the elements of a map?
2. What are the methods used to design the thematic maps?
3. What are maps used for?
4. What is the scale of the map?
5. Mention why field work is important? (2013, p. 71)

*Project.* Write a report about the surroundings of your area once you have visited it (2013, p. 71)

Based on the data collected by means of the interview approach, students can write about the relationship between the natural and cultural environment, about how peoples' activities are influenced by the resources available in the area, about the influence of weather upon the type of agriculture. There can be mentioned some experiences occurred during the field work (2013, p. 71).

(7) The *Glossary* comprises 17 terms. For instance, for *Theme 1 – Introduction to economics*, the following notions are explained: intellectual value, dependent, inflation, fiscal policies, credits (2013, p. 77).

(8) At the end of *section A*, there is a *Table revealing the demographic indicators* referring to Maharashtra and its districts. This data may be used throughout the entire year of study in the approach of various themes.

(9) *Bibliography* includes 17 sources.

## **ANALYSIS OF THE 10<sup>th</sup> GRADE TEXTBOOK**

*Geography and Economics standard X – Social Science, Part 2* (2016) has 60 pages. The book opens with an excerpt from the Constitution, it then continues the national anthem in Hindi language, then Plead, Introduction, Contents, maps, and lessons. Similar to the 9<sup>th</sup> grade textbook, this one is also twofold: *section I – Geography* (9 chapters) and *section II – Economics* (4 chapters). The data from the Constitution, national anthem, Plead and

the role of social sciences enjoy the same content as those from the textbook for the 9<sup>th</sup> grade.

In the 10<sup>th</sup> grade, the geography standard syllabus engulfs "India's Geography" with the following themes: Physical Divisions of India, North-India Mountains, North-India Plains, the Regions of the Peninsular Plateaux, Eastern and Western Ghats, the Coastline region, India's Islands, and Practical Geography.

This textbook, just the same as the Geography for the 9<sup>th</sup> grade, is designed based on the new curriculum and encompasses topics on the influence of the regional environment onto the country's development. There have been accounted students' age particularities and prior knowledge. The textbook is reliant on constructivism and practical methods of enhancing students' thinking and creativity. Such chapters as *Basic economic problems and solutions* and *Inflation* were included so as to enable students to grasp the economic concepts and daily problems in their life.

- (1) *Contents*. Within Contents, there are presented the themes, pages and some data about the photos, the maps, and the sources used in the textbooks. The studied themes are the following:

*Section I – Geography*

- *Physical divisions of India – pp. 1-9*
- *Northern mountainous region – pp. 10-21*
- *The North part - Desert region – pp. 22-32*
- *The North part – Western part (Pundjab and Haryana) - pp. 33-39*
- *The North part – Central and East Delta region - pp. 40-49*
- *Peninsular plateau region – Highlands - pp. 50-58*
- *Deccan peninsular plateau region - pp. 59-67*
- *The Ghats, islands and the coastline plains - pp. 68-81*
- *Practical geography - pp. 82-88*

*Section II - Economics*

- *Introduction in economy - pp. 89-92*
- *Basic economic problems and solutions - pp. 93-96*
- *Inflation - pp. 97-101*
- *The public system of the consumer's protection and distribution – pp. 102-107*

- (2) *Lesson analysis*. At the beginning of each unit, there are displayed the sub-themes:

**Table 4.** Section A: Geography (2016)

<i>Topics to learn</i>	
<i>1. Physical divisions of India / Geography of India (2016, p. 1)</i>	<p>1.1. Introduction</p> <p>1.2. Localisation and breadth</p> <p>1.3. Neighbouring states</p> <p>1.4. Process of region identification</p> <p>1.5. Physical divisions</p>
<i>2. Northern mountainous region / Himalaya and associated mountains (2016, p. 10)</i>	<p>2.1. Physical geography</p> <p>2.2. Weather</p> <p>2.3. Soils</p> <p>2.4. Natural vegetation and animals' life</p> <p>2.5. Population and settlements</p> <p>2.6. Economic development - Agriculture, Mining, Industry, Transports, Tourism</p> <p>2.7. Natural hazards and problems of the environment</p>
<i>3. Northern plain region - Desert (2016, p. 22)</i>	<p>3.1. Elements of physical geography</p> <p>3.2. Weather</p> <p>3.3. Soil</p> <p>3.4. Natural vegetation and animal life</p> <p>3.5. Population and settlements</p> <p>3.6. Economic development - Agriculture, Mining, Industry, Transports</p> <p>3.7. Tourism, natural hazards and environmental problems</p>
<i>4. Northern plain region - Western part/ Punjab and Haryana (2016, p. 33)</i>	<p>4.1. Elements of physical geography</p> <p>4.2. Weather</p> <p>4.3. Soil</p> <p>4.4. Natural vegetation and wildlife</p> <p>4.5. Population and settlements</p> <p>4.6. Economic development - Agriculture, Mining, Industry, Transports</p> <p>4.7. Natural hazards and problems of the environment</p>
<i>5. Northern plain region - The Central part, the Delta and the Eastern part (2016, p. 40)</i>	<p>5.1. Central plain</p> <p>5.1.1. Elements of physical geography</p> <p>5.1.2. Weather</p>

STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

<i>Topics to learn</i>	
	<p>5.1.3. Soil</p> <p>5.1.4. Natural vegetation</p> <p>5.1.5. Population and settlements</p> <p>5.1.5. Economic development – Agriculture, Mining, Industry, Transports</p> <p>5.2. The Delta region</p> <p>5.3. The Eastern plain</p> <p>5.4. Natural hazards and environmental problems</p>
<p>6. Peninsular plateau region –Central tableland (2016, p. 50)</p>	<p>6.1. Elements of physical geography</p> <p>6.2. Weather</p> <p>6.3. Soil</p> <p>6.4. Natural vegetation and fauna</p> <p>6.5. Population and settlements</p> <p>6.6. Economic development – Agriculture, Mining, Industry, Transports, Tourism</p> <p>6.7. Natural hazards and environmental problems</p>
<p>7. The Peninsular plateau region – Deccan (2016, p. 59)</p>	<p>7.1. Elements of physical geography</p> <p>7.2. Weather</p> <p>7.3. Soil</p> <p>7.4. Natural vegetation and fauna</p> <p>7.5. Population and settlements</p> <p>7.6. Economic development – Agriculture, Mining, Industry, Transports, Tourism</p> <p>7.7. Natural hazards and environmental problems</p>
<p>8. The Ghats, Coastline plains and islands (2016, p. 68)</p>	<p>8.1. The Western Ghats and the Western coastline plains</p> <p>8.1.1. Elements of physical geography</p> <p>8.1.2. Weather</p> <p>8.1.3. Soil</p> <p>8.1.4. Natural vegetation and fauna</p> <p>8.1.5. Population and settlements</p> <p>8.1.6. Economic growth</p> <p>8.1.7. Natural hazards and environmental problems</p> <p>8.2. The Eastern Ghats and Eastern coastline plains</p>

MARIANA-DOINA CÎINEANU

<i>Topics to learn</i>	
	<p>8.2.1. <i>Elements of physical geography</i></p> <p>8.2.2. <i>Weather</i></p> <p>8.2.3. <i>Soil</i></p> <p>8.2.4. <i>Natural vegetation and fauna</i></p> <p>8.2.5. <i>Population and settlements</i></p> <p>8.2.6. <i>Economic development</i></p> <p>8.2.7. <i>Natural hazards and environmental problems</i></p> <p>8.3. <i>Islands</i></p> <p>8.3.1. <i>Elements of physical geography</i></p> <p>8.3.2. <i>Weather</i></p> <p>8.3.3. <i>Natural vegetation and fauna</i></p> <p>8.3.4. <i>Population and settlements</i></p> <p>8.3.5. <i>Economic development</i></p>
<p>9. <i>Practical geography</i> (2016, p. 82)</p>	<p>9.1. <i>Cartography</i></p> <p>9.2. <i>Aspects of the map</i></p> <p>9.3. <i>Map reading</i></p> <p>9.4. <i>Statistical diagrams</i></p> <p>9.5. <i>One-dimensional diagrams</i></p> <p>9.6. <i>Bi-dimensional diagrams</i></p>

**Table 5.** Section B: Economics (2016, p. 88)

<i>Topics to learn</i>	
<p>1. <i>Introduction to economics</i> (2016, p. 89)</p>	<p>1.1. <i>Introduction</i></p> <p>1.2. <i>Means and the definition of economy</i></p> <p>1.3. <i>Types of economies</i></p> <p>1.4. <i>Characteristics of economy</i></p>
<p>2. <i>Basic economic problems and solutions</i> (2016, p. 93)</p>	<p>2.1. <i>Introduction</i></p> <p>2.2. <i>Basic economic problems</i></p> <p>2.3. <i>Solutions</i></p>
<p>3. <i>Inflation</i> (2016, p. 97)</p>	<p>3.1. <i>Introduction</i></p> <p>3.2. <i>Causes of inflation</i></p>

STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

<i>Topics to learn</i>	
	<p>3.3. <i>Effects of inflation</i></p> <p>3.4. <i>Measures to control inflation</i></p>
<p>4. <i>Public distribution system consumer's protection and distribution (2016, p. 102)</i></p>	<p>4.1. <i>Introduction</i></p> <p>4.2. <i>Public system of distribution - means</i></p> <p>4.3. <i>Objectives of the public distribution system (P.D.S.)</i></p> <p>4.4. <i>Progress of the P.D.S.</i></p> <p>4.5. <i>Population support by means of the P.D.S.</i></p> <p>4.6. <i>Remedial measures</i></p> <p>4.7. <i>Consumer's protection</i></p>

*Theme presentation.* The textbook comprises complex exhaustive data accurately reflective of elements of the physical and human geography which is being learned. The text of a theme does not exceed 5 pages (Table 6). At the end of each theme, there are four distinct drills by means of which are engrained elements of essential geography. Within the section Economy, there are 3 activities and a project. The images, maps and geographical data are well-chosen compliant with the theme in view.

**Table 6.** Text breadth of the themes belonging to *Geography Standard X*

Themes	Geography									Economy			
	1	2	3	4	5	6	7	8	9	1	2	3	4
Number of lines for a text	138	206	190	108	181	163	144	313	106	53	54	94	108

*Lesson structure.* The lessons are very well structured according to strong and weak aspects. At the debut of each chapter, there are maps for every scrutinised region. Students grasp easier the geographic positioning of each region and the elements that are to be analysed because on the Map of India are separately shown the subdivisions to be learnt.

*Illustrative material.* At the forefront of the textbook, range four maps which can be employed for studying various themes. (Map 1: India – Political Map; Map 2: India – Great Physical Divisions; Map 3: India – Main Routes; Map 4: India – Foremost Railways). Inside the textbook, one is to find 44 thematic maps.

*Theme 8 – The Ghats, the Coastline Plains and Islands* in the textbook – encompasses: The General Map of India's Islands and Eastern

and Western Coastlines (2016, p. 68); The Physical Map – The Coastline Plains and the Ghats (2016, p. 69); The Map of Population Distribution in the Coastline Plains and the Ghats (2016; p. 72); The Map of the Agricultural Subcultures, The Map of Commercial Cultures' Charts (2016, p. 73); The Map of The Andaman and Nicobar Islands and the Map of India – The Isles Lakshadweep (2016, p. 78). There are as well included seven images of Gujarat Temple, Mumbai Rajabai Tower, a lake in Kerala, Vishakhapattanam Harbour, the pageant held in Guruvayur Temple – Kerala, Tsunami, a coral island (2016, pp. 68-81).

The wealth of geographic denominations. *Theme 7 – The Deccan Peninsular Plateau Region* engulfs 74 geographic denominations grouped as follows:

○ *Regions*: The Namada, The Mahadeo, The North of India, The Madhya Pradesh, The Chhattisgarh, The Tamil Nadu, The Kannada, The Koyna, The Kaveri, The Satpuda, and The Maharashtra;

○ *Plateaux*: The Deccan, The Maharashtra, The Karnataka-Telangana, The Eastern plateaux, The Gujarat, The Chota, The Nagpur, The Kornataka, The Maidan, The Maikal, The Dandakaranya, The Tamil Nandu, and The Garhjat;

○ *Mountains*: The Maikal, The Eastern Ghats, The Western Ghats, and The Satpuda-Mahadco-Maikal Range;

○ *Rivers*: The Tapi, The Wainganga, The Godawari, The Krishna, The Wardha-Wainganga basin, The Indravati, The Mahanadi, The Brahmani, and The Baitarni;

○ *Mountain pass*: The Burhanpur;

○ *Palaces*: Kolhapur, Mysori;

○ *Waterfalls*: The Chitrakut;

○ *States*: Chhatisgarh, Odisha, and Gujarat;

○ *The Peninsula*: India;

○ *Plains*: The Andhra Pradesh, The Rayalaseema;

○ *Cities*: Hyderabad, Bengaluru, Pune, Nanded, Turangabad, and Malanad;

○ *Districts*: Bhandara, Nagpur;

○ *Temples*: Balaji, Meenakschi, and Madurai;

○ *Historic cities*: Aurangabad, Bider, Bijapur, Mysore, Salem, Coimbatore, and Nanded;

○ *Touristic centres*: Tuljopur, Pandhapur, Shirdi, Gulbarga, and Tirumala.

*Map related drills. Theme 9 – Practical Geography* – includes four drills. There are provided four charts comprising: the rate of literacy,

irrigation surfaces for various cultures (rice, wheat, cotton, sugar cane and the like), sugar production spanning over five years, production of cold cereals in the central high plateau (rice, wheat, etc.). It is demanded that placing reliance on the chart analysis, students solve the following tasks:

- (a) Design a graph using the years and data of literacy from the chart;
- (b) Carry out a graph employing the years and sugar cane production from the chart;
- (c) Design a rectangular diagram making use of the data from the table on irrigated cultures and surfaces;
- (d) Draw a circular diagram using the data from the table regarding cereal productions (2016, p. 87).

(3) The *Glossary* from Economics encompasses 31 terms: Chapter 1 – 10 terms; Chapter 2 – 8 terms; Chapter 3 – 6 terms, Chapter 4 – 7 terms. *Theme 2 – Basic economic problems and solutions* displays the following terms: efficiency, priorities, laboratory intensive technique; central planning authority, intensive technical capital, consumer goods, raw materials, under-capacity.

### ***ANALYSIS OF THE 11<sup>th</sup> GRADE TEXTBOOK***

*The World Physical Geography* textbook (*Standard XI*) features a small number of learning units regarding the movements of Planet Earth, the major relief, weather, water dynamics, natural vegetation and biodiversity, and environmental problems. In presenting these themes, were taken into account the relationships between the environmental components, fact which helped students be aware of the essential role of Geography in understanding environmental problems and identifying solutions to these ones. In Table 7, we convey the learning units from the *World Physical Geography, Standard XI (2013, Syllabi for standards XI and XII, pp. 77-78, Maharashtra State Board of Secondary and High Secondary Education, Pune, myCBSEguide.com)*.

**Table 7.** Learning Units from the *World Physical Geography* textbook *Standard XI (2013)*

<i>Learning Units</i>	
<i>1. Elements of physical geography</i>	<i>1.1. Mountains</i>
	<i>1.2. Plateaux</i>
	<i>1.3. Plains</i>
<i>2. The Earth's movements</i>	<i>2.1. Rocks</i>

MARIANA-DOINA CÎINEANU

	<p>2.2. <i>Earthquakes</i></p> <p>2.3. <i>Volcanoes</i></p>
3. <i>Weather</i>	<p>3.1. <i>Temperature</i></p> <p>3.2. <i>Pressure</i></p> <p>3.3. <i>Rainfall</i></p>
4. <i>Systems of flowing and water resources</i>	<p>4.1. <i>Main rivers</i></p> <p>4.2. <i>Lakes</i></p> <p>4.3. <i>Water availability</i></p> <p>4.4. <i>Usage</i></p> <p>4.5. <i>Water deficit</i></p>
5. <i>Oceans and the marine ecosystem</i>	<p>5.1. <i>Structure of the oceanic seabed</i></p> <p>5.2. <i>Groups of island chains - archipelagos</i></p> <p>5.3. <i>The marine ecosystem</i></p> <p>5.4. <i>Ocean resources</i></p>
6. <i>Natural vegetation</i>	<p>6.1. <i>Distribution</i></p> <p>6.2. <i>Importance of woods</i></p> <p>6.3. <i>Deforestations</i></p>
7. <i>Biomes and biodiversity</i>	<p>7.1. <i>Types of biomes</i></p> <p>7.1. <i>Biodiversity</i></p>
8. <i>Hazards</i>	<p>8.1. <i>Natural hazards</i></p> <p>8.2. <i>Anthropic hazards</i></p>
9. <i>Practical geography</i>	<p>9.1. <i>Projections</i></p> <p>9.2. <i>Types of projections</i></p> <p>9.3. <i>Methods of representing characteristics of relief and slopes on a map</i></p> <p>9.4. <i>Topographic maps</i></p> <p>9.5. <i>Map reading</i></p> <p>9.6. <i>Remote sensing - Aerial photographs</i></p> <p>9.7. <i>Graphs for envisioning weather conditions</i></p> <p>9.8. <i>Reading</i></p> <p>9.9. <i>Meteorological instruments</i></p> <p>9.10. <i>Field work</i></p>

### ***ANALYSIS OF THE 12<sup>th</sup> GRADE TEXTBOOK***

*The Geography Standard XII* textbook has 76 pages. The present textbook comprises an excerpt from India's Constitution, the National anthem, Plead, Foreword, Contents, Introduction to human geography, maps, and the lessons.

*Foreword* (the seventh unnumbered page in the textbook) states that, in this study year, the approach topics are population, migration, agriculture, minerals, energy resources, industry, trade, and economic divisions.

In *Introduction*, it is mentioned the fact that the *World Physical Geography* studied in the 11<sup>th</sup> grade helps students learn the current features of the mountains, plateaux, plains, rivers and oceans as well as their positioning. Further, it is stated that Human Geography studies the man and one's adjustment to the environment. Studying Human Geography in the 12<sup>th</sup> grade helps students grasp the way in which the world has been altered by man due to one's astuteness and prowess. The emphasis is laid on understanding humans' endeavours, current development, and economy advances. The systematic and analytical study of the various human factors, as well as the environment provide students with help so as to fathom the mode in which various activities have been favoured by the typical conditions of a certain time span. It is prominent that they grasp how natural borders prevail over political ones or vice versa, how people of different ethnicities and races, in distinct geo-climatic conditions, behave differently.

In the textbook, there is, for instance, mentioned that on the Earth organisms try to live in harmony with nature and adopt various ways of living which match their geographical conditions. An example, the Pigmies in Congo Basin build their shelters in trees. Gujari and Baharwalii from Jammu-Kashmir move upstream and downstream of valleys so as that their cattle be able to graze the sod on the available lawns. Students learn that the level of resource consumption also depends on the stages of cultural development and technological progress of a group. Students are aware of how man has altered one's behaviour and lifestyle in compliance with the surrounding physical environment and natural resources.

Students understand that the development of science and technology has made that everything be possible and has engendered many changes in the daily life in a mere short time. The change of the lifestyle of a major population has led to exceeding resource usage, has determined loss of biodiversity and resources affecting natural processes and cycles. Once man has faced various devastating effects of natural catastrophes, one has been constrained to change one's approach in relation to the environment.

Presently, it is laid a greater emphasis on protection and conservation than on using and exploiting the resources, the students being convinced to

adhere to the "Go Green" tenet. Students learn that in-between the cultural and natural environment there ought to be a harmonious blend so as to make man's life cosier, but without destroying nature.

(1) *Contents*. The 12<sup>th</sup> grade syllabus displays 8 units and each comprises other sub-units.

The Table of Contents mentions the themes, pages, and the sources which were used.

These themes are the following:

1. *Population - pp. 1-16*
2. *Migration - pp. 17-28*
3. *Agriculture - pp. 29-52*
4. *Mineral and energetic resources - pp. 53-71*
5. *Industry - pp. 72-91*
6. *Trade - pp. 92-105*
7. *Transports - pp. 106-124*
8. *Economic development - pp. 125-138*

(2) *Theme presentation*. We have analysed the following aspects: text length (Table 8), lesson structure, documents included in presenting a theme, geographic terms.

**Table 8.** Text length of the themes in *Geography Standard XII*

Theme	1	2	3	4	5	6	7	8
Number of lines in a text	366	323	624	461	479	348	460	145

At the beginning of each theme there are shown: the pursued content (Table 9), then a 5-18-line summary, and, at the end, are included eight activities. The schematic drawings, images and tables are highly useful to grasp the themes.

**Table 9.** Learning units proper to *Geography Standard XII* textbook

<i>Learning units</i>	
<i>Unit 1: Population (2013, p. 1)</i>	<i>1.1. Growth and spread of population 1.2. Rapport between genres, literacy 1.3. Race, religion and language</i>

STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

<p><i>Unit 2: Migration Introduction (2013, p. 17)</i></p>	<p><i>2.1. Types of migration 2.2. Causes of migration 2.3. Effects of migration 2.4. Migration – since remote aeons till present</i></p>
<p><i>Unit 3: Agriculture Introduction (2013, p. 29)</i></p>	<p><i>3.1. Types of agriculture     3.1.1. Subsistence agriculture – nomadic grazing, primitive subsistence or crop rotation, intensive subsistence     3.1.2. Commercial agriculture –cereal farms, intensive cultures, agricultural plantations, vegetables, horticulture 3.2. Basic crops     3.2.1. Rice     3.2.2. Wheat     3.2.3. Cotton     3.2.4. Sugar cane     3.2.5. Tea     3.2.6. Coffee     3.2.7. Rubber</i></p>
<p><i>Unit 4 : Minerals and energetic resources (2013, p. 53)</i></p>	<p><i>Introduction numbering and arranging the tables – there is no numbering except from where we wrote. Mineral importance Mineral classification Mineral formation Factors influencing mineral resources exploitation 4.1. Mineral spread     4.1.1. Iron ore     4.1.2. Bauxite     4.1.3. Manganese     4.1.4. Uranium     4.1.5. Thorium     4.1.6. Coal     4.1.7. Oil     4.1.8. Natural gases</i></p>
<p><i>Unit 5: Industry (2013, p. 73)</i></p>	<p><i>Classifying industry Industry location factors 5.1. Produce processing industry</i></p>

	<p>5.1.1. Cotton textiles</p> <p>5.1.2. Sugar industry</p> <p>5.1.3. Grocery</p> <p>5.2. Mining industry</p> <p>5.2.1. Iron and steel industry</p> <p>5.2.2. Automotive industry</p> <p>5.3. Other industries</p> <p>5.3.1. Electronics industry</p> <p>5.3.2. Technology of information</p> <p>5.4. Industrial regions</p> <p>5.4.1. Central Europe</p> <p>5.4.2. N-E U.S.A.</p> <p>5.4.3. Japan</p> <p>5.4.4. Eastern China</p> <p>5.4.5. Mumbai-Pune</p>
<p>Unit 6 : Trade (2013, p. 92)</p>	<p>Introduction</p> <p>Trade concept</p> <p>Types of trade</p> <p>6.1. International trade</p> <p>6.1.1. The concept of international trade</p> <p>6.1.2. Trade exchanges</p> <p>6.1.3. Harbour prominence in international trade</p> <p>6.1.4. Major categories of imports and exports</p> <p>6.2. International organisations</p> <p>6.2.1. WTO</p> <p>6.2.2. EU</p> <p>6.2.3. ASEAN</p> <p>6.2.4. OPEC</p> <p>6.2.5. APEC</p> <p>6.2.6. SAARC</p>
<p>Unit 7: Transports (2013, p. 106)</p>	<p>Introduction</p> <p>7.1. Types of transport</p> <p>7.1.1. International railways and roads – distribution</p> <p>7.1.2. International seaways and their distribution</p> <p>7.1.3. International Airways and their distribution</p>

STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

	<p>7.2. Pipes</p> <p>7.3. Communication</p>
<p>Unit 8 : Economic development (2013, p. 125)</p>	<p>Introduction</p> <p>8.1. Global situation</p> <p>8.1.1. What does economic development mean?</p> <p>8.1.2. Disparities in economic development and causes</p> <p>8.2. Human development</p> <p>8.2.1. Human development INDEX</p> <p>8.2.2. Contemporary global situation</p>

*Lesson structure.* All lessons are layered in assets and weak aspects.

The *illustrative material* typical of a lesson in this textbook is varied, complex and correct, adequately related to the context and enjoys a greater prevalence than the text. Each theme features countless maps, tables, formulae, and relevant images. The maps and images enable the understanding of the addressed themes.

At the debut of the textbook, appear the following maps: World Political Map (Great Countries); Distribution of World Population – 2010; GDP – Contribution in Agriculture; Regional Trade Organisations (2013 – pages 11-14, unnumbered). The textbook encompasses 54 thematic maps in colour, 35 tables, and 91 images.

*Theme 1 – Population* – displays 5 maps: Infant Mortality Map, Birth Rate Map, Mortality Rate Map, Population Density Map, Distribution of World Races Map (2013, pp. 2-15). This lesson features three charts: World population distribution on continents, Numeric Growth of Population, and Model of Demographic Transition. There are five tables with data: Population Growth from 2004-2005 up to 2010-2011; Trend of population growth on continents; Proportion between genres (2011); Religions worldwide; Percentage of spoken languages. There is a mental map concerning culture which encloses population, economics, environment, religions, and languages. There are five boxes with supplementary information aiming at population distribution, resource availability, proportion between genres, spoken language study, and religious freedom.

The wealth of geographic terms. *Theme 1 – Population* (2013, pp. 2-15) manages 53 concepts typical of *Physical Geography*: tropical forest, barren, frozen, mountains, river basins, coastline plains, localisation, weather, soil, natural vegetation, continental zones, relief, topography, tableland, plateau, continental zones, relief, topography, tableland, plateau, topography, cold climate, mountains, basin, pollution, polar, temperatures, deserts, wet climate, drought prone climate, heavy rainfall, swampy soils, monsoon climate, temperate zone, Northern Hemisphere, monsoon climate, perennial rivers, subtropical zones, steppe, prairie, subtropical zones,

geographical basins, coastlines, region, Equatorial, valley, regional, solar radiation, polar regions, South, North-East, spatial distance, terrestrial surface, and regions.

*Theme 1 – Population* includes 113 concepts specific of *Human Geography*: population, civilizations, population dynamics, population growth, structure of population, birth rate, mortality rate, migration, life hope, developed countries, underdeveloped countries, countries in development, farming, commerce, trade, infant mortality, cities, states, industry, industrial revolution, economy, infrastructure, pollution, life quality, natural enhancement, agrarian revolution, oil, density, human resources, nations, development, population quality, transition demographic model, increased standstill, early expansion, late expansion, diminished standstill, decline, natural decline, population distribution, infertile soil, cultivated soil, total population, physical factors; economic, political, social factors, factors, cultural factor, available zones, transport, natural resources, fishing, international exchange, harbours, water resources, fertile soils, human settlements, agricultural productivity, mineral resources, irrigations, energy, golden mines, urbanisation, cereals, mechanised farm, diamonds, migration, refugees, wars, families, social structure, agriculture economy, culture rate, technology rate, mechanised cultivation, coniferous, heavy industries, socio-economic development, demography, occupational structure, illiteracy, fertility, mobility, poverty, urban environment, rural area, human race, Negroids, Mongoloids, Caucasian, Papuan, Bushmen, Dravidians, Christians, Muslims, Hindu, Buddhists, Sikhs, Jews, colonisation, printing revolution, Spanish language, Arabic language, Bengali, Portuguese, Russian language, Marathi, Ahirani dialect, Wharadi dialect, Maithili dialect, Tulu dialect, and Welsh language.

*Theme 1 – Population* reveals 76 specifically geographic denominations: Papua New Guinea, India, China, Shri Lanka, South Korea, Sweden, Germany, the Gange, the Rhine, the Ruhr, Singapore, Mumbai, Eastern Plateaux, the Indus, Mesopotamia, The Deccan Plateau, The Coastlines, The Andes, The Himalaya, Greenland, Alaska, Sahara, Kalahari, Thar, Australia, Surat, Chhotangpur, USSR, Siberia, Pakistan, Bangladesh, Maldives, Myanmar, North-East Africa, North-East Nile, Egypt, the U.S.A., Canada, North America, the U.K., France, Belgium, Denmark, Spain, Italy, Switzerland, The Netherlands, Europe, Japan, Singapore, The Persian Gulf, Brasilia, Venezuela, America, Russia, Eurasia, Saudi Arabia, Eastern Mongolia, Congo, the Amazon, Oceania, Africa, Punjab, Uttar Pradesh, Haryana, Turkey, Afghanistan, Iran, the Pacific Ocean, the Arctic Ocean, New Guinea, Indonesia, Malaysia, Australia, and Scotland.

*Theme 6 – Commerce* includes 136 geographic denominations: ASEAN, the EU, OPEC, SAARC, WTO, the U.S.A., the U.K., Russia, India, Canada, Middle East, Japan, Kashmir, North India, South India, Western Europe, South Korea, Australia, South Asia, China, Bangladesh, Argentine, Afghanistan, Kuwait, Piraeus, Greece, Mumbai Port, Shanghai, Guangzhou, Hong Kong, Shenz-Ren, Rotterdam, The Netherlands, Busan, South Korea,

## STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

Antwerp, Belgium, Tokyo, Kobe, Hamburg, Germany, Singapore, Thailand, Melbourne, New York, Los Angeles, Jawaharlal, Nehru, Navi Mumbai, Vishakhapatnam, Kochi, Calcutta, Chennai, Kandla, Africa, South America, France, Italy, Arabia, Iran, Iraq, Kuwait, UAE, Pakistan, Singapore, Spain, Mexico, Brasilia, GATT, Geneva, Switzerland, the Soviet Union, Hungary, Luxembourg, EEC, European, Steel community, Rome, Lisbon, Maastricht, ECSC, EEC, EURATOM, Schengen, United Nations, Austria, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, G8, G20, Ireland, Leetonia, Lithuania, Malta, Poland, Indonesia, Malaysia, Filipinas, Brunei, Vietnam, Myanmar, Laos, Cambodia, Baghdad, Venezuela, Qatar, Algeria, Libya, Nigeria, Angola, Ecuador, Gabon, Indonesia, Israel, Egypt, Syria, Hawaii, New Zealand, Papua New Guinea, Filipinas, Taiwan, Sri Lanka, Nepal, Bhutan, Maldives, Afghanistan, Kathmandu, Colombo, and Mauritius.

Drills associated with maps/drawings. *Theme 2 – Migration* includes several exercises based on maps:

*Example:* Identify and name on a world map, including corresponding conventional signs, the following:

1. Localise some of the old civilizations.
2. The region where there are over 50% emigrants.
3. The Indian City which attracts a great part of immigrants (2013, p. 28)

*Theme 5 –Industry* displays a set of exercises:

Q3: Argument geographically the following statements:

1. Unprocessed materials influence industry localisation.
2. The world has turned into a “global village”.
3. The food processing industry is not enough developed in some parts of the world.
4. Governmental politics influence industry localisation.
5. Industry is well-developed in the North-East U.S.A.
6. Japan is denominated to say so “a century within a decade”.
7. Mumbai-Pune industrial region is India’s most developed one (2013, p. 9).

Q7: Provide the answers for the following questions (in 12-15 lines):

1. What does an industrial region mean? Explain the important factors which influence the growth and development of the industrial region.
2. Explain the industry of meat processing.
3. Write in detail about the industrial region of Central Europe.
4. Explain the sugar industry (2013, p. 91).

## DISCUSSIONS AND CONCLUSIONS

School textbooks are elaborated throughout the entire India based on the *National Curriculum for School Education* (2005), and on the *National Curriculum Framework of the National Curriculum* (2010). Unlike Romania, where the norms of the Learning Frame Plan apply to the whole of the pre-university learning system (Dulamă, 2008, 2010a, 2012b), in India, these statements have been applied in 54% of the states, such as Maharashtra, one of India's most developed economic estates.

Within the *Learning Frame*, in 2010, Geography is included in the social sciences, being studied together with the themes of history, political sciences, economics, unlike Romania where geography is an independent subject in the Frame Plan despite being allotted one hour per week in high school (Dulamă, 2008, 2010a, 2012b, 2013).

At domestic level, in India there are various school curricula: school syllabi for students up to the 12<sup>th</sup> grade (CBSE), school syllabi aimed at attaining the Indian Certificate for Secondary Education (ICSE), and the Indian School Certificate (ISC).

India's textbooks are designed by huge panels of authors possessing competences from different domains – teachers, geographers, economists, photographers, cartographers, fact which engenders the growth of their quality, whilst in Romania the textbooks are designed using small panels of authors as high school teachers, as well as professors (Dulamă, 2010b, 2010c; Dulamă & Roşcovan, 2007; Dulamă & Mihacea, 2010).

The Indian textbooks, which we have analysed here, bear the same structure and are designed based on a unitary pattern, as in Romania. India's geography textbooks comprise a smaller number of Geography learning units compared to Romania's textbooks (Dulamă, 2010b, 2010c, Dulamă & Mihacea, 2010) and those of the Republic of Moldova (Dulamă & Roşcovan, 2007).

Information used in the geography textbooks was carefully selected according to scientific criteria, but also according to students' age particularities and at the level of their knowledge and skills. The texts occupy a smaller breadth than the illustrative material. Language is accessible to the students, albeit it employs more geography terms and geography denominations. In Romania, researchers spotlight the loading of some textbooks with geography terms, fact which hampers students' understanding of the contents (David, 2000; Dulamă, 2008, 2009, 2010a, 2012b).

In the analysed textbooks, geography terms are explained throughout the textbook and in the *Glossary*, so as to foster the degree of grasping, accessibility and appealing aspect of this subject, in order to

ensure an interdisciplinary, transdisciplinary (Dulama,2010), and practical study of the Earth.

The content is arranged according to the principles of their constructivist theories of learning (Dulamă and Ilovan, 2008), so that students are enabled to achieve knowledge progressively. Owing to these textbooks, it is conspicuous that students pursue themes of Physical Geography, Human Geography, and Regional Geography. Special attention is allotted to studying the state where students live. Each region of the country is minutely studied until the end of Middle School and High School cycles.

Considering the standpoint of Regional Geography, by means of organising the contents, the following is envisioned: revealing accurately the elements of physical or human geography, explaining the role they have in the regions' development; identifying the correlations between the elements of physical geography with those of human geography; comparing various regions; highlighting the advantages and/or disadvantages of a region; the association of the knowledge attained and reality; shaping the geographic rationale and fostering critical thinking (Dulamă and Ilovan, 2006).

So as to grasp the geographic features of the learnt units in these textbooks, students are recommended a vast array of learning activities relying on the illustrative material, likewise based on field work research (practical drills, projects). Due to these practical drills, students are to develop prowess typical of regional geography, an aspect noticed by the literature of specialty (Dulamă and Ilovan, 2010, 2013). The learning activities which are included in the textbooks indicate student centred learning, feature also specific of the pre-university learning in Romania in certain historic periods (Dulamă and Ilovan, 2015).

The textbooks under analysis are richly illustrated with maps, charts, photographs, fact which favours students' understanding of space (Dulamă, 2006a, 2006b) and of geographic problems stemming from reality (Dulamă, 2004).

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STUDY OF GEOGRAPHY TEXTBOOKS FOR 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> AND 12<sup>th</sup> GRADES ...

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