

THE REVIEW OF THE HIGH SCHOOL GEOGRAPHY TEXTBOOKS IN TERMS OF THE CONTENT AND METHODS IN TURKEY

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Abstract

Geography textbooks have been revised significantly in recent years in comply with the changes in the curriculum since 2005. Textbooks play a pivotal role in learning and teaching considering that they are the main source of study for students and guide for teachers. They can facilitate learning process when they are properly written and structured, and if the opposite situation prevails then, it is easy to foresee the negative effects of it on the whole system which will totally be detrimental. Turkish Ministry of National Education publishes school textbooks for each lesson and distributes them to students for free every year updating and changing their contents regularly. Although these changes and amendments and substantial improvements, there are still many problems and deficiencies in textbooks that need to be dealt with. These problems range from the curriculum to the content of the textbooks, to classification problems, to the readability of the textbooks. We will try to spot and make suggestions about these problems focusing in particular on geography textbooks. A successful and working education system consist of not only perfect textbooks but also open-minded, innovative teachers and students and textbooks are just one of the most crucial components of it. All of them is required to reach the Western standards in education.

Key Words: Geography textbooks, classification, geography curriculum, learning methods

INTRODUCTION

Geography is a vibrant, ever-changing and much ramified discipline. This ramification brings in some problems at the same time and that's way there are a lot of subjects that geographers must deal with while writing textbook. The major characteristics on which a geography textbook are based;

- Properly constructed and structured curriculum
- Well-established objectives of geography education
- A group of experts consisting of not only geographers but also other disciplines adjacent to the geography commissioned to write geography textbooks
- The needs of the society

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The main tool for education in schools is textbooks as is always. They should comprise contemporary approaches, methods and techniques that must respond to the needs of the society in which we live. Although many amendments made to the geography curriculum, some problems related to textbooks still persist. While we are trying to spot and find out those problems, we conclude the essay by making some suggestions in connection with geography textbooks.

METHODS AND PURPOSES

In this study, mainly scanning method employed. The whole geography textbooks for high schools were scanned and analyzed from different points.

The aims of this study are to find out significant deficiencies in geography textbooks, to understand what are the main reasons of those deficiencies and to make suggestions how to improve the quality of textbooks.

WHERE GEOGRAPHY STANDS AND WHAT IS GEOGRAPHY?

Before venturing to discuss the geography textbooks, it is important to remember the key developments in geographical understanding through time shortly. Early or ancient geography has a narrative, descriptive characteristic fed by travel writings and observations of surrounding areas consisting mostly of unclassified and immature knowledge. As new places were being explored, geographic knowledge began to expand at the same time. After a long periods of explorations of new places, travel writings, mapping the world's regions especially in the West spanning from roughly 15th century (specially the age of discovery) onwards, just as geography tried to find its own way. With the increasing knowledge about different places geography has emerged as a new and burgeoning scientific discipline since late 19th and first decades of 20th centuries. These developments have contained striking eras in phases such as physical geography's dominance, regional geography, quantitative revolution, geography as spatial science and social science and so on. All these developments surely have and will have impacts on the geography education from different aspects. As geographic thoughts and tendencies shift, approaches, methods and tendencies on the geography education will consequently shift.

Geography is literally, 'earth-writing' from the Greek geo (earth) and graphia (writing), the practice of making geographies ('geographing') involves both writing about (conveying, expressing or representing) the world and also writing (marking, shaping or transforming) the world. The two fold in and out of one another in an ongoing and constantly changing series of situated practices, and even when attempts have been made to hold geo-graphing' still, to confine its objects and methods to a formal discipline (Gregory et al., 2009). As understood from this definition geography is a complex science and its content and boundries are difficult to be framed at first sight. Before questioning and reviewing geography textbooks, it may be useful to trace the changes in geographical understanding and thought which have enormous implications on the geographical education. The history of geography contain a variety of approaches, theories, methods and models some of which still continue their dominance over discipline while some others lost their prominence.

Although there are many definitions (see the definition above) about what geography is, the most shared definition by many geographers is that geography mainly deals with human, place, space and interactions between them, so some subjects such as hydrology, petrology, soil science, geomorphology which were studied for a long time within the geography are now seen as each different area of study and there has been a tendency to leave them out of the geography, but some part of these disciplines still find a place in geography especially with their human interactions and their teaching in universities far more common than in high schools in Turkey. There has been an ongoing debate as to where geography stands, how it should cover physical geography, to what extent geography must continue studying physical geography. In Western countries like France, Spain and the United States geography is treated with a human aspect, notably in France geography textbooks do not include at all heavy physical geography subjects highlighting the importance of human and environment interactions with their effects and results. This tendency in geography seen in Western countries has begun showing its effects for some time in Turkey, but physical geography subjects still have a significant place in the curriculum. Especially geomorphology, soil, vegetation, petrology are the main topics of the 9th and 10th grade geography curriculums, and these topics require for students to memorize endless list of rocks, soils and tree, lake types generally excluding the human aspect on the matters. These kinds of lists sometimes asked in exams and that makes geography seem terribly uninteresting science for students and in doing so, they are unable to understand what geography really covers, so there is a strong need to change the point

of view towards the discipline which will facilitate the understanding as to where geography goes through the ages.

SUBJECT INTEGRITY AND HEAVY CLASSIFICATION

One of the main problems seen in geography textbooks is the lack of subject integrity. In general, a subject is treated from various aspects and after handling other different subjects there is a return to the previous one for covering its another aspect. This kind of sequence as handling a subject, makes more difficult learning for students and teaching, and especially 10th grade geography textbook is full of these sorts of applications. For instance, in the 10th grade textbook (Hacısalihoglu and Midilli, 2011) the subject of “soil and its classification” treated in the second part of the book, as “soil types in Turkey” treated in the sixth part although the two subjects closely associated with each other. This kind of approach makes subjects seem irrelevant from one another preventing a healthy learning process. For these reasons subjects must be covered in the same part from different aspects so that students can comprehend subjects from all points.

Heavy classifications and subclassifications in geography textbooks are another source of difficulty which makes subjects seem far more complex than they are. Students should have more simplified textbooks that will allow them to precisely understand the matters involved. Classification combining with a demanding academic language and lengthened content force students to give up studying geography. For example, on the subject of Turkey’s vegetation forms in 10th grade textbook there is a classified list of trees that grow in different regions of Turkey and their growing conditions. Similar example can be seen in the soil subject. This subject begins with a broad classification of soil types and their features and where they are found in the world.

Table 1. Soil Classification

Zonal Soils	Intrazonal Soils	Azonal soils
Laterites	HalomorphicSoils	Alluvials
Brown Forest Soils	HidromorphicSoils	Moraines
Terra-Rossa	CalcificSoils	Loesses
Chernozems		Colluvials
Desert Soils		Lithosols
Brown Steppe Soils		Regosols

Source: 10th Grade Geography Textbook

As is shown in the table above the study of soil begin with classification of soil types and then the subject progresses through the soil features, distribution of soils on earth according to climates and vegetation and relations between them. On one hand, soil science has developed into being an independent field in recent decades, in textbooks this subject tends to be treated as broadly as possible unlike the current approach adopted to the discipline. On the other hand the terms such as calcification, lateritization, podzolization, hydration, oxidation carbonization used in the books are beyond the level of high school students because these sorts of terms taught in the lessons of “Soil Geography” in Geography Departments and Agricultural Faculties (Sahin, 2006).

Classification can be made depending on the criteria that have been taken into consideration (Cin ve Ozcelik,2002). It might be abstract or concrete according to the nature of the theme. If a subject is easy enough to understand; thus, there is no need a classification which make learning more difficult leading to rote learning that is frowned upon in education.

Table 2: Turkey’s Region Classification

Physical Geography Regions	Human Geography Regions	Economic Geography Regions	Complex Regions
Plain Regions	Densely-Populated Regions	Agricultural Regions	Agricultural-Industrial-Tourism Regions
Climate Regions	Sparsely-Populated Regions	Industrial Regions	Mining-Industrial Regions
Vegetation Regions	Urban Regions	Mining Regions	Commercial-Tourism-Agricultural Regions
Water Regions	Rural Regions	Free Trade Regions Tourism Regions	

Source: 12th Grade Geography Textbook

This classification above taken from the 12th grade textbook on the subject of Turkey’s regional classification replaced by the old one. Firstly, there are mainly 4 regions then these 4 regions contain various subregions and finally the country divided up into 16 regions according to their geographical features. This classification itself poses problems because the subject treated in this way will make it difficult to see the subject clearly. Secondly, a town, city or a piece of land can be classified in different regions due to its complex geographic structure. Also, some questions could be raised here like; Is there a strong need to divide up a country into regions? Is regional

geography a necessity for learning and teaching? What effective results can we get by creating different regions in a country? For these reasons, it is quite difficult to find useful and meaningful to divide up a country into regions, besides many countries have renounced the concept of a precise, unique geographic region, since 1960s regional geography began to lose its importance within the discipline (Baud et al.,2008). Also from that time onwards regional geography was seen as highly descriptive, narrative and lacking clarity (Claval, 1995). According to a study conducted by Özey suggests that a country cannot be divided to many regions because it is an artificial classification without geographical integrity (Ozey, 2011).

In this respect, we could think on two fundamental questions here. First, as it is said before some subjects like soil, geology have been considered that they are mostly beyond the scope of the geography for quite some time. When the geology emerged as a new discipline, many themes about earth's physical features began to become the working area of this discipline. As this happened, many geographers then quitted studying pyhsical geography in the United States (Sauer, 1940). Second, the study of geography through textbooks hugely based on memorizing rather than commenting, analyzing and reasoning that they are indispensable for learning.

APPROACHES AND METHODS USED IN TEXTBOOKS

Many of the themes in the textbooks contain comprehensive listings that students must learn because many of them have been asked in exams. They are based on pure memorizing so these lists will probably be forgotten after exams. That means learning process is not complete whether students pass or fail in exams. Learning is the acquisition of knowledge and using it when and where necessary and transferring it to the situations he/she encountered. Modern education promotes the innovative pedagogical approaches that lead students to think about the phenomena and their interactions within a discipline including geography.

In recent years, case study and case method have been increasingly used in geography. These studies facilitate understanding about a subject studied. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. Researchers have used the case study research method for many years across a variety of disciplines (Soy, 1996). Case method also promotes student discussions and shifts the emphasis from a teacher-centred to a student-centred classroom (Grant, 1997). Despite these advantages,

case studies still do not have enough place in geography classes mostly because of the curriculum that needs to be revised in a comprehensive way. On the other hand, geography textbooks gradually begin to include comparative studies, for example, in 12th grade textbook there is a comparative study of the two countries – Germany and Nigeria- according to their economic, social and demographic features. Those studies enable students to draw conclusions and compare two or more things, e.g. phenomena, countries, continents, vegetation formations, economic development to each other. Also, comparative studies and comparison also seen as an essential tool for generating knowledge (Gobin, 1998).

Fieldworks are an essential part of geography education allowing students to observe some geographic structures and formations in their natural environment (Ozgen, 2011). They are more widespread in universities than high schools, but it is necessary to make such visits that will help students develop geographical skills through observation and sensing. Planning, preparation, conduct of fieldwork, follow-up and evaluation, safety, child protection should be carefully taken into consideration when a trip is planned (May and Richardson, 2005). The lack of equipments and money, legal procedures, organization problems are the main difficulties in realizing these trips in schools. Sometimes students visit the places around the city or town where they live, but these visits are far from being satisfactory.

In geography textbooks every subject ends with an assessment and evaluation section in which there are true-false items, fill in the blanks, general questions related to the subject and multiple-choice questions. Evaluation generally based on the memorizing geographical notions and terms. There is a lack of integrity between the curriculum goals and the consequences which can be extracted from this kinds of exercises and evaluations. Also, a study on geographical concepts which found in 9th grade geography textbook, points out that many students do not know, misunderstand some geographical concepts and terms. For instance, students often mistake orogenesis for epirogeny and latitude for longitude (Gecit, 2010).The examples given in a theme should be selected from the areas in which students live and see (Demirci, 2006).

Multiple-choice questions are the unique question type nearly used in every official exam including University Entrance Exams. That's way these kinds of questions are an inseparable part of the education system and widely used in each lesson no matter what discipline is involved. Despite their some advantages such as easy scoring, m

allowing many people to sit for an examination at the same time, they have a lot of drawbacks because it is hard to apply those questions to a situation where problem-solving and expression of ideas needed. Tests are also more suitable for low learning objectives than high order ones. Moreover, poorly-written test questions yield scores of dubious value that are inappropriate to use as a basis of evaluating the student achievement (Burton et al., 1991). Millions of students enter the University Entrance Exams every year, and it is quite difficult to evaluate them in an objective way without using test-based questions in spite of their significant drawbacks.

In textbooks matching up the statements is another way of evaluating which employed widely. It consists of two sections and both section has some statements. Students should complete it by matching the expressions up correctly. These types of questions have increasingly been asked in examinations for the convenience that they provide to teachers while they are marking exam papers. Students tick the proper option in a table given in exams rather than writing and explaining the things asked. Teachers use it in order to avoid rote learning and its implications though such questions remind us of rote learning or similar approach to it.

Table 3: An Example of “Match Up the Statements”

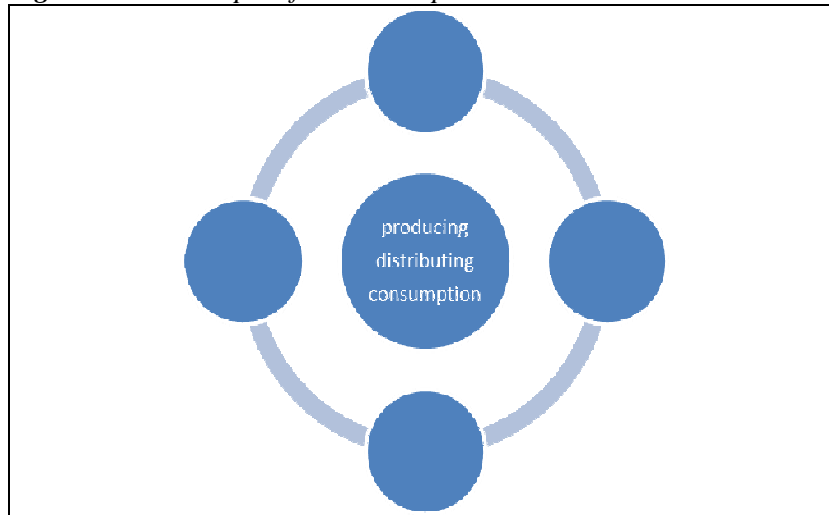
Soil Type	Location
Acidic forest soil	Niğde-Nevşehir-Kayseri-Erzincan
Brown and chestnut forest soil	Western Black Sea Region
Terra-rossa	Western and Middle Taurus Mountains
Alluvials	Gaziantep-Şanlıurfa
Rocky and sandy soil in mountainous and volcanic areas	Ankara-Eskişehir-Konya
Lime soil	Plains made up of deposits and sediments collected by large rivers

Source: 10th Grade Geography Textbook

In recent years, mind or concept maps have been used for assessing student’s knowledge and learning skills. In the example given above it is asked the relations between natural factors and human and economic ones in terms of produce, distribute and consumption of goods but such studies usually lack questioning, analyzing and making deductions. Also, it is significant that if mind maps are poorly constructed then subjects could seem to students more complicated than they are. If teacher himself/herself constructs these maps, then he/she must be competent to do them, if not, he/she should get some professional help (Akengin, 2011). These maps should force students

to think on geographical phenomenon, concepts allowing them to interpret the things that they read and see from a different perspective.

Figure 1. An Example of “Mind Map”



Complete the blank with the following terms: Climate, landforms, vegetation formations and water resources

TEXTBOOK’S LANGUAGE AND QUALITY

The language used in geography textbooks is too heavy and sometimes academic for students, that’s way many students have difficulty in understanding while studying geography on their own. Textbooks should be written according to the grammar rules and sentences must be short and understandable. Geographic terms which are given in a precise way making it easy for students to grasp (Dogany, 2002). Especially 9th grade textbook is full of abstract and concrete terms with long definitions. According to a study, the readability of the 9th and 11th grade geography textbooks determined by some tests and formulae like “Cloze, Smog, Fog” is beyond the level of students especially for those who are attending at vocational and general high schools (Gecit, 2010). For instance, 9th grade geography book contains many abstract or concrete geographical terms like potamology, limnology which may be seen in academic geography books in universities.

At this point, there are two problems. Firstly, abstract terms needed to be simplified in line with the level of student’s comprehension.

Secondly, some complex terms causing trouble for students can be treated in the way that will include visual and other materials facilitating learning and educational processes. It is noticed that there is no difference in the language used in textbooks though the level of comprehension differs enormously from one class or age to another. Unlike the current situation – using heavy and puzzling terms in schoolbooks-the dialogues used in the textbooks could be seen as far below for high school students' level. In short, the textbook's language must be having varying levels of difficulty according to grades neither below nor high than student's understanding.

Ministry of National Education has begun to give schoolbooks for free to students since 2006 so every school and class use same textbooks as the main source of study. Geography textbooks have improved in quality and content in recent years, but there are still problems, for instance, paper quality is not good enough and it affects reading and wish for studying and reading. Also, the photos, pictures, diagrams, tables used in the textbooks are not clear or sometimes they are so blurred that it is hard to piece together the essential points in a subject. Finely designed and printed textbooks will assist student in understanding and learning the subjects they study.

USING MAPS

Map is a representation of all or a portion of the planet or some other vast environment: the typical map is graphic and includes discernible elements of scales, projection and symbolization (Gregory et al., 2009), or a cartographic representation of specifically chosen spatial information (Mayhew, 2004). Maps are an essential tool for generating knowledge and make the phenomena and concepts understandable easily and they are the most used and being used in geography education as always. With the help of increasing technology, there is a large number of maps classified according to their subject and content. Currently, many geographical topics have been handling with the technology of geographic information system (GIS) and these topics contain a wide variety of cartographic information and representations, but these kinds of technologies do not find a place within the geography education yet. In high schools student generally have to fill in the blanks in maps or make a simple sketch or map with the related subject based on hugely the exercises in textbooks. It can be seen from different perspectives that these maps are problematic and difficult to deal with. These problems could be listed as follows;

Maps in books are small in size and often with blurred pictures which hinder student from seeing what is being told and what is meant in them and another point sometimes colours used in maps mix each other. By looking at these maps student could be puzzled rather than making conclusions through map reading, so maps should cover the whole page with detailed legend, clear representations and drawings which enable learners to follow the concrete and abstract phenomena. Maps in textbooks often taken from internet sites which do not fulfill the need of students. Especially physical geography and topographic maps are low in quality and appearance. "The distinctive characteristic of a topographic map is that the shape of the Earth's surface is shown by contour lines. The map includes symbols that represent such features as streets, buildings, streams, and vegetation. These symbols are constantly refined to better relate to the features they represent, improve the appearance or readability of the map, or reduce production cost" (<http://egsc.usgs.gov>). Considering these definitions and features, maps should be made and drawn by professional team who are competent on the matter. According to the definition above maps are far from being satisfactory and inspire students to work by maps.

Exercises and learning by means of maps are one of the most used methods in geography. Nevertheless, exercises and homeworks in textbooks are largely based on texts and text-related questions rather than map making and map reading. The books that enriched and consistent with detailed map will surely facilitate learning and teaching in an effective way.

CONCLUSIONS AND SUGGESTIONS

As it is discussed before, there are significant problems regarding geography textbooks in spite of the recent improvements. These problems mainly stem from the curriculum and its implementation. Before carrying out big improvements in the geography textbooks, there is a strong requirement to change the geography curriculum through which the textbooks of high quality could come out, because curriculum forms the basis for textbooks. It is through curriculum that pedagogic innovation can find its full expression. Curriculum can reflect the changed ambitions for teaching which are implied in the classroom experiments (Leat, 2009).

The 2005 geography curriculum is completely different from the previous curricula in terms of the programme approach and other components. Basically, the programme is student-centred and

querying; that is, it is based on the constructivist approach. For the new curriculum to be truly successful, general problems with the educational system in Turkey also need to be addressed, and teachers kept up to date with in-service training (Yasar and Seremet, 2009). In short, curriculum is at the core of geography textbooks and education so the changes that will be made should begin with the curriculum. Geography curriculum should be revised again after that of 2005 and this revision must consider omitting some themes, which are now considered outside the geography. We can finally make some suggestions as follows:

- Geography textbooks should use an understandable, clear language not too academic, technical or informal.
- While treating and explaining the physical geography terms and phenomenon, teacher must be aware of the terms he/she uses are very complex and need to be exemplified.
- Fieldworks are one of the important components of geography education. Despite considerable difficulties that will be met while planning a field trip, these trips are required to master the physical geography subjects notably. Fieldwork is recognised as being one of the most effective and enjoyable methods of teaching and learning (Kent et al., 1997), (Dunphy and Spellman, 2009), such trips are rarely taking place.
- Tables, diagrams, figures, photos and maps in the textbooks must be clear enough to understand and make comparison and deductions. Blurred images and pictures might alienate students from studying the discipline. It is seen that photographs in Physical Geography of Turkey textbooks were mainly composed of 'text complementing', 'explanatory', 'situational' and 'problem' photographs. Moreover, there were a limited number of photographs which had 'concentration', 'before-after' and 'criticising' characteristics. In addition, 'creative' and 'active' photographs had taken little or no place (Yasar and Seremet, 2007).
- Textbook should not include deep knowledge about a subject which will be able to teach in universities.
- An overview of the evaluation and assessment chapters must be taken concerning their inconveniences mentioned above.

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