

The Evaluation of the Fourth Grade Students' Performance in Preparing and Drawing Maps of Iraq (Applied Cartographic Study Includes Departments of Geography at Colleges of Arts, Education (Ibn Rushd), and Education Girls-University of Baghdad)

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Abstract

The aim of the research is to evaluate the performance of fourth grade students in departments of Geography in drawing geographical maps and identifying geographical phenomena in a precise scientific manner, with emphasis on the need to use (map elements) in drawing.

The map of Iraq was the sample used in the research.

The researcher adopted the field study (tests) in the department of Geography in three colleges at University of Baghdad, namely (Arts, Education (Ibn Rushd), and Education for Girls). The sample size was about (125) students in each department, so the total number of students was (375) students, which contributed to give a clear picture about students' performance.

The main point at which the research reached is that there are good aspects in drawing maps and identifying geographical phenomena, but not at the required level. Still some other aspects are met with a great failure due to a number of reasons such as adopting old methods, the lack of financial support, and the lack of new scientific programs which contribute in raising the level of students' performance in drawing maps. Another reasons why students are not at the required level is ascribed to the fact of not adopting the tests in drawing maps, and also the absence of specialized professors as in the Department of Geography (College of Education for Girls).

Keywords: Evaluation, Students, Maps, Iraq.

Introduction:

Geography is no longer a descriptive science as it was in the past. It has become a purely applied science. Since mapping is the backbone for geographers, it is necessary to pay attention to it and to provide all the necessary requirements for its progress, especially as it is not only geographical, but used in many other fields as well.

Hence the idea of this research is to find out the level of students in preparing and mapping as a basis first, and secondly checking their performance in drawing the map of Iraq.

The Problem:

The problem lies in two questions:

- 1- Do the students of the fourth grade have the ability to draw a geographical map, especially that the research has tackled all the steps of drawing a map.
- 2- What is the ability of the student to draw and to identify the features on the map of Iraq which the researcher has taken it as a highly accurate model in this study?

Research Hypothesis: -

The researcher depends on two hypotheses:

- 1- Despite studying the geography of Iraq and the cartography in departments of Geography in Iraq, there is a problem in preparing, drawing and identifying the geographical phenomena on the map of Iraq.
- 2- Having specialized professors has a major role in preparing and mapping the map, especially the map of Iraq.

Limits of the Study:

The research is represented by the field study, through the tests and interviews with students in the fourth grade and professors in the departments of Geography in the three following colleges:

College of Arts / University of Baghdad.

College of Education (Ibn Rushd) / University of Baghdad.

College of Education for Girls / University of Baghdad.

Research Aims:

- 1- Knowing the ability of the students of geography to draw geographical maps, by using map elements.
- 2- Knowing the ability of the students to draw and identify the geographical phenomena on the map of Iraq, especially that they studied the geography of Iraq in previous years.
- 3- Identifying the problems faced by the students in drawing a good map suitable for the students of Departments of Geography, and suggesting solutions for these problems.
- 4- Conducting a comparison among departments of geography, in order to show the role of the specialist professor in improving students and preparing them as good outputs to the field of work.

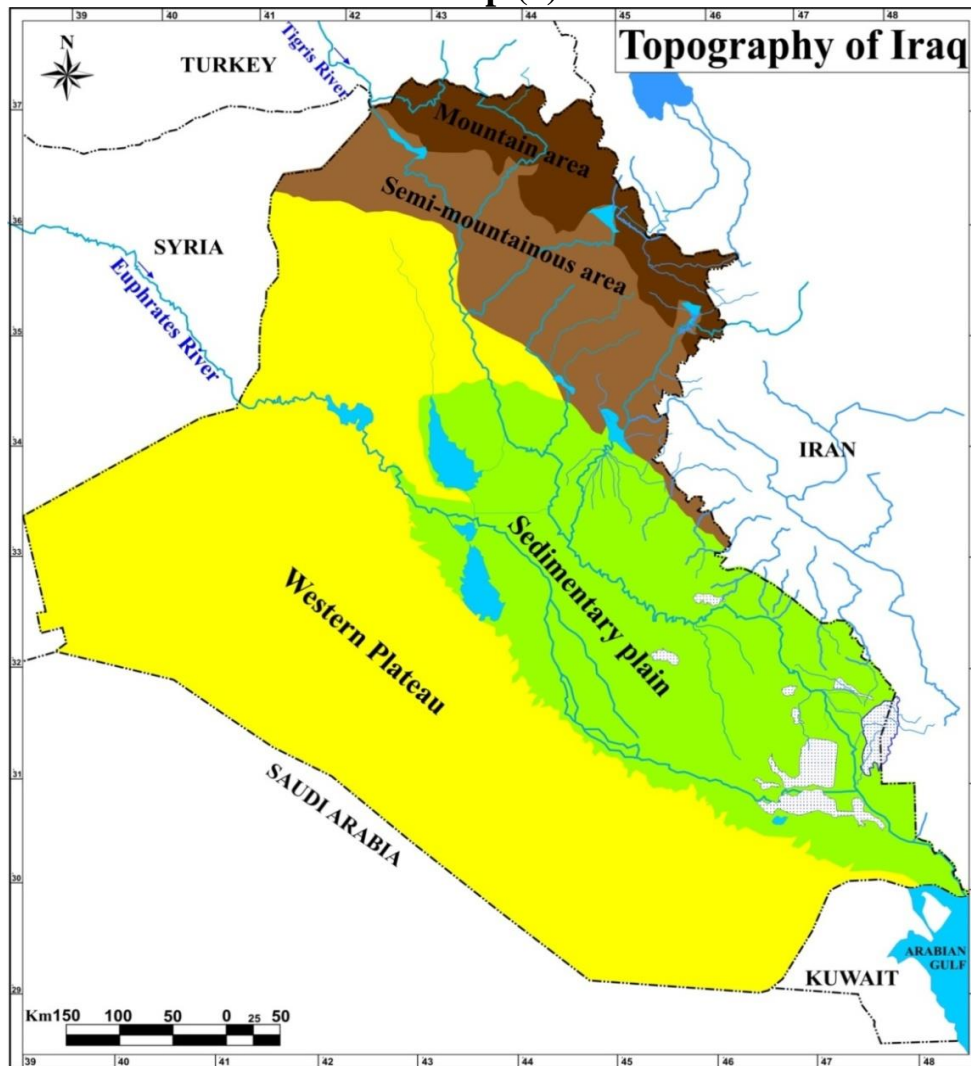
Research Methodology: -

- 1- The researcher relied on descriptive analysis by analyzing the maps used in the test (125) students were selected as samples in each of the three departments of Geography. The test was carried on three stages. Firstly, white papers were distributed to students for the purpose of drawing political borders, fixing the names of

neighboring countries, drawing rivers, marshes and lakes as well as topography of mountainous, sedimentary plain, wavy region, western plateau. See map (1). Secondly, white papers were distributed on students to draw administrative units (governorates). Stage three was an Iraq's blind administrative map, and the test was the designation of administrative units (governorates), as well as latitudes and longitudes. The researcher has concentrated in all tests on the need to adopt the scientific method in drawing maps especially maps elements (Rasheed ,2016, p.57).

- 2- The researcher has also relied on personal interviews with some professors and students to know their methods in learning and teaching the geography of Iraq and the science of cartography. The interviews were conducted in the three departments of Geography.

Map (1)



Source: The map is drawn by the researcher depending on, Abbas Fadil al-Saadi, Food Security in Iraq (Reality and Ambition), Mosul, Dar al-Hikma Press, 1990.

Iraq

Iraq is the country of Mesopotamia (Tigris and Euphrates) or the homeland of civilizations and the country of Thousand and One Nights (AL-Feel.1964. p.5).

Iraq is located between latitudes (38.45 ° - 48.45 °) east of the Greenwich line, and between the arc width (29.5 ° - 37.23 °) north of the equator (Al- Yasiri ,2006, p.6). then it is located in the northern half of the earth and occupies the Arabian part of the continent of Asia.

As for its geographical location, Iraq is bordered to the north by the Turkish Republic, to the east by the Islamic Republic of Iran, to the south by the Arabian Gulf and Kuwait, to the south and southwest by Saudi Arabia, and to the West by the Hashemite Kingdom of Jordan and the Syrian Arab Republic. Note map (2).

The area of Iraq is about (434,128) km² (Central Statistical Organization, Annual Statistics ,2004, table (1/1). P6) It is therefore one of the largest countries according to the classification of (Glassner) (Martin, 1993, p.66).

Concerning population their number according to the last census in (2009) about (31,664,466) million (Ministry of Planning, Inventory and Numbering Reports, Report (1), 2011, Table (14))' distributed in 18 governorates. Map (2) can be seen.

The Map

The map is a source of knowledge and its role is becoming increasingly important in scientific and applied fields. The map is one of the most important means of visual analysis in the modern era. It enables researchers to analyze phenomena in a high scientific manner with short time and effort.

There are many definitions for the map, some of them is that "it is a linear representation of selected phenomena and objects of a part of the earth's surface on a flat surface. It is a necessary and important tool for understanding the interrelations between man and the environment, because it defines the distances, spaces and locations of various spatial phenomena (Al-Tai, College of Arts Journal, No. (68), 2005.p 293).

As defined by the universally known Oxford Dictionary (a miniature drawing of the earth's surface (or sky) or part of it, in which natural and human features shown on a flat surface of paper or other materials. The point on this drawing represents a specific geographical or celestial location in accordance with the drawing scale and projection method (Dawood, 2013. P. 16)

It is also known as a schematic or miniature form of natural and human phenomena on the surface of the earth or part of it, and is

represented according to a specific scale and projection according to the phenomenon in question (Al-Akidi, 2015.p37).

Thus, the map is one of the most important means used by geographical and non-geographical persons, for a number of reasons:

The well-done map helps to detect the relationships among geographical phenomena, because it illustrates the similarities and differences among different phenomena (Al-Shuraie, 1997, p. 35).

- 1- The map helps to clarify the image to decision makers, which contributes to increase the accuracy of the decision, which in turn supports the development plans.
- 2- The map is an effective means of clarifying future plans and policies.
- 3- The map is one of the most important means of analysis especially visual Analysis.
- 4- The map can be used as a tool to study the time and spatial variation of geographical phenomena.
- 5- The map helps to monitor human moves and their transportations in a precise and clear way.

Map (2)



Source: The map is drawn by the researcher depending on, the Republic of Iraq, the Ministry of Water Resources, General Directorate of Survey, Iraq administrative map, scale (1: 1000000), 2010.

Evaluation of the 4th grade students' performance in drawing the map of Iraq

The researcher has made a field study. He visited departments of Geography in three colleges. The test was conducted for a group of students. The number of students was (125) students from each department. The researcher also asked students and teachers a number of questions to obtain some information to enable him to accomplish this study and reach at accurate results. The tests and results are as follows:

First: Department of Geography / College of Arts

The researcher has conducted the test and obtained the results according to the percentages (Ibrahim, , 1999, p. 79-80) shown in Table (1).

Table (1) Test and results of students of the 4th Grade/Department of Geography / College of Arts

	Skills (*)	The Level		Percentage %
		Not Good (Zero)	Good (1)	
1	The skill of drawing the map of Iraq (The framework)	30	95	76
2	The skill of identifying neighboring countries	10	115	92
3	Latitudes and longitudes	20	105	84
4	Skill of drawing boundaries of administrative units (governorates)	88	37	29,6
5	The skill of naming administrative units (governorates)	16	109	87,2
6	Skill of drawing rivers, lakes and marshes	7	119	95,2
7	The Skill of drawing and identifying the terrain of Iraq (mountainous region, wavy area, sedimentary plain, western plateau)	37	88	70,4

Source: - The table is prepared by the researcher depending on the field study of testing (125) students in the Department of Geography / College of Arts (4/12/2017)

*- Skills means (the ability acquired by the individual by accomplishing the work that is assigned to him/her, depending on time, effort and efficiency) (Al-Masrif, 1982, p 107-108.)

- It is also known as the ability to perform and learn well whenever we want. (Cottrell, 1999, p.21.)

The Results of Table (1):

1-The skills achieved are six out of seven, and thus one skill is not realized, namely the skill of drawing administrative boundaries (governorates), according to the percentage (50%).

2 -The highest skill achieved is the sixth skill (drawing rivers, lakes and marshlands) and its percentages (95.2%).

3-Lesser than this is the seventh skill (skill of drawing the topography of Iraq), which is about (70.4%)

4-The least skill was the fourth skill of drawing the boundaries of administrative units (governorates) which is (29.6%).

Second: Department of Geography/College of Education (Ibn Rushd)

The researcher has conducted the test and obtained the results according to the percentages shown in Table (2).

Table (2) Test and results of students of the 4th Grade/Department of Geography / College of Education (Ibn Rushd)

	Skills	The Level		Percentage %
		Not Good (Zero)	Good (1)	
1	The skill of drawing the map of Iraq (The framework)	57	68	54,4
2	The skill of identifying neighboring countries	15	110	88
3	Latitudes and longitudes	70	55	44
4	Skill of drawing boundaries of administrative units (governorates)	104	21	16,8
5	The skill of naming administrative units (governorates)	42	83	66,4
6	Skill of drawing rivers, lakes and marshes	38	87	69,6
7	The Skill of drawing and identifying the terrain of Iraq (mountainous region, wavy area, sedimentary plain, western plateau)	94	31	24,8

Source: - The table is prepared by the researcher depending on the field study of testing (125) students in the Department of Geography / College of Education (Ibn Rushd) (6/12/2017).

The Results of Table (2):

1-The achieved skills are four out of seven.

2 -The highest achieved skill is the second skill (the skill of identifying neighboring countries), which is (88%).

3-Lesser than this is the first skill (the skill of drawing the map of Iraq (The Framework) (54.4%).

4-The least is the fourth (the skill of drawing administrative boundaries (governorates), and it is (16.8%).

Second: Department of Geography/College of Education (for Girls) Table (3) shows the results and percentages of that department:

**Table (3) Test and results of students of the 4th Grade/
Department of Geography / College of Education (for Girls)**

	Skills	The Level		Percentage %
		Not Good (Zero)	Good (1)	
1	The skill of drawing the map of Iraq (The framework)	104	21	16,8
2	The skill of identifying neighboring countries	58	67	53,6
3	Latitudes and longitudes	63	62	49,6
4	Skill of drawing boundaries of administrative units (governorates)	111	14	11,2
5	The skill of naming administrative units (governorates)	79	46	36,8
6	Skill of drawing rivers, lakes and marshes	61	64	51,2
7	The Skill of drawing and identifying the terrain of Iraq (mountainous region, wavy area, sedimentary plain, western plateau)	96	29	23,2

Source: - The table is prepared by the researcher depending on the field study of testing (125) students in the Department of Geography / College of Education (for Girls) (27/2/2018).

The Results of Table (3):

- 1 -The achieved skills are only two out of seven.
- 2 -The highest achieved skill is the second one (identifying neighboring countries) with (53.6%).
- 3-Lesser than this is the skill that has the percentage (51.2%) which is the sixth skill (drawing skills of rivers, lakes and marshes).
- 4 -The fourth skill is the least (the skill of drawing the administrative boundaries (governorates) it is just (11.2%).

Fourth: The total tests and findings of the study

Tests and results for all departments are shown in Table (4)

Table (4) Tests and results of 4th grade students in the departments of Geography in the three colleges

	Skills	The Level		Percentage %
		Not Good (Zero)	Good (1)	
1	The skill of drawing the map of Iraq (The framework)	191	184	49
2	The skill of identifying neighboring countries	83	292	77,8
3	Latitudes and longitudes	153	222	59,2
4	Skill of drawing boundaries of administrative units (governorates)	303	72	19,2
5	The skill of naming administrative units (governorates)	137	238	63,4
6	Skill of drawing rivers, lakes and marshes	106	270	72
7	The Skill of drawing and identifying the terrain of Iraq (mountainous region, wavy area, sedimentary plain, western plateau)	227	148	39,4

Source: The table is prepared by the researcher based on Tables (1, 2, and 3).

The Results of Table (4):

- 1-The achieved skills are four, while the unrealized skills are three.
- 2-The highest skill achieved by students in the fourth grade and in the three departments is the second skill (the skill of identifying neighboring countries), where it reaches (77.8%), followed by the sixth skill (skill of drawing rivers, lakes and marshlands) which is (72%).
- 3-Lesser than this is the third skill (the skill of identifying latitude and longitude), reaching (59.2%).
- 4-The least i.e. the skill which is not achieved, is the fourth skill (the skill of drawing the boundaries of administrative units (governorates) which is only (19.2%).

General Analysis for the Findings of the Study:

It is clear that there is a disparity in the results of each skill, it varies from one department to another, and the following points illustrate this variation:

- 1-It is noticed that the first skill (the skill of drawing the map of Iraq (The framework) is achieved in the department of Geography in College of Arts and Education (Ibn Rushd), while in the third college (Education for Girls) the skill is not achieved scoring a very small percentage, and thus this had an impact on the general level and led to not achieving the skill with (49%).

2-The second skill (identifying neighboring countries), is achieved in all three departments of Geography, which is reflected on the general level, so, the result has been achieved.

3- For the third skill (the skill of identifying Latitudes and longitudes) it is achieved in the department of Geography /College of Arts, while not achieved in the other departments, but at the general level it is achieved and the reason behind its achievement is the high percentage scored in the Department of Geography /College of Arts in addition to the fact that its percentages in the two other departments are nearly achieved.

4-The fourth skill (drawing boundaries of administrative units (governorates)is not achieved in all departments of Geography in the three Colleges; therefore, the general level of this skill is not achieved.

5-The fifth skill (the skill of naming governorates) is achieved in the departments of Geography /Colleges of Arts and Education (Ibn Rushd) and is not achieved in the College of Education (for Girls), but the general level of this skill is achieved with (63.4%).

6- The sixth skill (drawing rivers, lakes and marshlands) is achieved in the departments of Geography in the three colleges, which has led to the achievement of this skill at the general level.

7-The skill of drawing and identifying of the terrain of Iraq is achieved in the department of Geography of the College of Arts, and not achieved in other departments, and this has an effect on the general level which has not been achieved.

Conclusions:

1-There is a clear weakness among the students of the fourth grade in drawing the map of Iraq, either through drawing or identifying the required phenomena, especially in departments of Geography in colleges of Education (Ibn Rushd / Girls), due to the method used in the study of the Geography of Iraq, since the teachers distribute ready-made maps and ask students to put the geographical phenomena on them, they do not rely on students to draw.

It was noted that teaching ' Geography of Iraq' as a course material in the Department of Geography college of Arts, depends on the student in drawing the maps of Iraq, and identifying the required phenomena. The most prominent evidence of this is the existence of such a question (as to draw the map of Iraq and to identify some phenomena on it) in the first course final exams of the academic year (2017 - 2018) for third grade students. The questions did not include a deaf map of Iraq. It was all the responsibility of the students to draw

it all by themselves (- Interviews with students and professors of departments of Geography).

2. The researcher also noted that there is a serious weakness in how to draw the geographical map by the students, he noted the absence of the basic elements of the basic map (direction of the north, map key, the line, etc.) in a very large proportion of maps, especially that the researcher has emphasized the use of the scientific aspect and the elements of the map drawing. This indicates that the students were unable to use the skills of drawing the map, although there is a teacher for the material of cartography within the curriculum.

3 - Old book adoption by some teachers, as well as the failure to follow the modern methods of teaching, whether to the material 'Geography of Iraq' or the material of 'maps' which has its effect on performance of the students.

4-The teaching staff lacks the dependence on the practical side and the tests, especially in the college of Education for Girls, which affected the level of students.

5. Some disciplines are not taught by the specialized teachers, and this is what was observed in teaching the material of 'maps' in the Department of Geography college of Education for Girls, and this negatively affects the outputs (students)

Recommendations:

1 -Using modern methods in teaching, as well as the use of smart boards or the use of modern programs in drawing maps, and this requires the provision of modern computers and advanced programs.

2-Adopting the practical side and the tests continuously prompts students to take care of the material, and this will increase the scientific and practical experience of the student.

3-Do not follow the picture cards ("blind maps") that show the country's external borders, but encourage students to practice drawing themselves.

4 - Providing financial support, especially that teaching some specialties in Geography depend on field and practical sides.

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