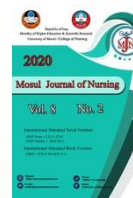




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## Spatial and spatial analysis of the distribution of schools in the center of Nineveh province

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### abstract

The study examined the statistical analysis of educational services in Mosul city. The importance of this study is that it dealt with most important aspect of the society in which the process of progress and prosperity of education. The study relied on analytical descriptive method in analyzing the data collected from the concerned authorities e.g. Nineveh Directorate of Education by using the SPSS and GPS maps for the purpose of providing a good image of the distribution of a better place that may help decision-makers to find appropriate steps to develop the educational services. The study found that the percentage of male schools did not reach the percentage of female schools. The study also found that the number of schools in the right side of Mosul city is not proportional to the percentage of students numbers, and the percentage of teachers numbers are not suitable with the number of pupils, in contrast with the schools in the left side, which all these ratios are almost appropriate with the reality. The study recommended the need for attention by the concerned authorities to study the trends of population growth by selecting the best locations for new schools and the need to create a database for each educational institution and presented on the web pages of all schools and directorates of education.

**Keywords** : spatial analysis; distribution of schools

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**Introduction:**

In its efforts to enhance the educational and scientific state in Iraq, the ministry of education has put forth a strategy towards ambitious educational plans that can develop considerably education and learning. One of the suggestions was that the central government should continue providing the basic and extraordinary pack up to local governments to rehabilitate and maintain the infrastructure of schools that were totally destroyed in Nineveh governorate and especially the schools of the right side of the city and the financial status must not be a hindrance not to get the necessary means to apply these long-term plans to enhance the educational march and develop it to be better than before. Schools should be expanded and sound environment ought to be provided for students in their schools. Hundreds of schools must be rehabilitated that do need rebuilding and maintenance so that they provide a health and sound environment for the students to overcome the environmental conditions and consequently upgrade competent students (1). The question of specifying the efficiency of the spatial distribution is one of the most important subjects especially after the advance that happened in computational systems; it is important for those planners who are after decision-makers together with determining the actual need to rebuild and rehabilitate schools (1). Statistical programmes and spatial and graphic analyses make sketches and samples depending on standards to assess spatial distribution of services and selecting the spatial sites for the new schools via lessening costs' transportations by reducing distance; the system of transportations in the city becomes better if the services are near houses and this applies to the rest of the services and spheres for the research introduces a sample for tackling the services of elementary generalization (3).

**One: Research Hypothesis:-** Nineveh governorate suffers from bad educational services and few primary schools in various quarters in the city of Mosul and low vocational performance in a way that goes along with advancement, population distribution, and urban expansion.

**Two: Time Limit of the Study:-** The study is confined to studying the educational services in the study district during (2017-2018).

**Three: Research Methodology:-** The vocational methodology has been adopted in this study besides the analytical one via analyzing tables and data statistically in addition to the field study in the governorate.

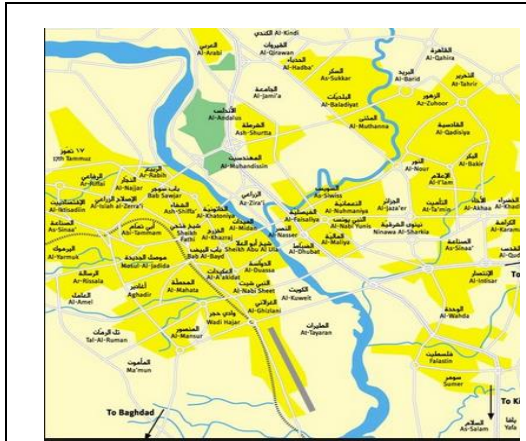
**Four: Aims of the Study:-** The study aims at employing spatial and graphic analyses in planning the efficiency of the spatial distribution of the primary schools in the centre of the city of Mosul in accordance with the population density and determining the best sites to build more schools and apply the planning standards of schools by using statistical analyses to distribute these schools according to necessity so as to serve the educational growth plan in the city.

**Basics and Standards of Primary Education in Iraq:-**

The educational system in Iraq falls into three stages: the primary, secondary, and preparatory. The primary stage is basic for building generations for these three stages and in it the education for children is compulsory from six to eleven years for both sexes and the study period is six years according to law and this stage aims at encouraging pupils to develop their personalities mentally, morally, and socially (4). Schools, in general, and the primary school, in particular, are given due regard in the life of the society and are paid great attention by city planners especially when selecting the suitable place for building these schools. The primary education is considered the great power that helps the society overcome poverty and ignorance besides the possibility of investing natural resources; primary education is the cornerstone to achieve prosperity and advancement in the society (5). So, the question of primary education and improving its level and its suitable distribution in various population quarters are the main goal to improve the academic level of the pupils and this is also the goal our study seeks to achieve (6). The city of Mosul is considered the centre of Nineveh governorate and the second largest city in Iraq in population after the city of Baghdad; the number of its population in 2014 was about (3.5) million and its area is (180)

square kilometers. The population is distributed around the eastern and western sides in districts and towns and the river Tigris passes through the city splitting it into two

sides, the left and the right ones and the map no. (1) represents the quarters of the city with the names.



Map (2) represents mosul neighborhoods



Map (2) represents mosul its right and left sides

**Spatial Distribution of Primary Schools:-**

In this study we have been able to get a complete statistic for the number of the schools and the pupils in each school as well as the spatial distribution of the schools in the city of Mosul for both the right and left sides. We have been provided with these data of (2017-2018) from the department of planning and follow up in the education directorate of

Nineveh governorate. Table no.(1) shows the primary schools in the right side of the city of Mosul and which are (157) schools for boys and girls most of which have double classes and triple classes. The number of the pupils in these schools is (104401) pupils, in addition to the number of the general teachers and the specialized teachers and the lecturers in each school and the supervisors.

5	15		20	4	20	475	الولاء للبنين	81
2	20	20		4	22	551	الماتر للبنات	82
7	15	22		4	22	813	سيفاء للبنات	83
14	40	54		4	54	510	القراسي 2 للبنات	84
7	15	22		4	22	625	نعم بن مسعود للبنات	85
12	40	2	50	4	52	901	النهضة للبنين	86
16	15		26	4	26	460	دار العلوم للبنين	87
10	15	25		4	25	138 2	الحايل للبنات	88
7	20		27	3	27	841	النهروان للبنات	89
13	15		28	4	28	657	ابن الجزري للبنين	90
10	15		25	3	25	353	البيضا للبنين	91
17	15		25	5	32	624	القدس للبنين	92
7	15	22		3	22	730	البيضا للبنات	93
11	15	21	5	5	26	596	ذات المنصور للبنات	94
12	40	43	9	4	52	850	الايصال /1/ للبنات	95
14	15		29	3	29	970	الرازي للبنين	96
14	15	29		5	29	635	الحسن بن علي للبنات	97
13	15	8	20	3	28	552	حسام الامام للبنين	98
11	15		26	4	26	857	الاشتر للبنين	99
13	15	28		4	28	519	الحارث للبنات	100
5	15	20		3	20	991	ام الكتاب للبنات	101
5	15	20		5	20	835	حلب للبنات	102
12	0		52	4	5	100 7	بركة الرحمن للبنين	103
5	15	20		4	20	485	ميمونة للبنات	104
7	15	22		2	22	735	عمر بن عبد العزيز للبنات	105
7	15	22		2	22	650	سفيان الثوري للبنات	106
	15	20	5	3	25	139 5	الرسول للبنات	107
13	15	22	6	4	28	750	ورقة بن نوفل للبنات	108
4	15		29	2	29	633	ابن خلدون/2/ للبنين	109
8	20		28	4	28	496	محمد مهدي الجواهري للبنات	110
22	30	2	50	4	52	980	التاجين/م/ للبنات	111
8	14		22	4	22	495	الايصال/2/ للبنين	112
2	20		22	2	22	386	المنصورة للبنين	113
2	20		22	3	22	917	الصادق الامين للبنين	114
8	14	22		3	22	940	ام حبيبة للبنات	115
10	15	5	20	4	25	446	سهل بن سعد للبنين	116
12	20		32	8	32	946	الحق العظيم للبنين	117
8	20	28		3	28	925	الحق العظيم للبنات	118
11	18	25	4	3	29	386	الظبية /2/ للبنات	119
10	10	20		4	20	105 2	صفية بنت عبدالمطلب	120
2	40	2	50	4	52	109 2	عبدة بن الصامت للبنين	121
13	20		34	4	34	500	حطين/2/ للبنين	122
13	23		22	5	35	1046	مسرى الرسول للبنين	123
2	20		22	6	22	491	كعب بن مالك للبنين	124
2	20	22		5	22	461	ليلى الغفارية للبنات	125
5	15	17	3	2	20	445	جوزيرية بنت الحارث	126
14			29	2	29	865	الحايل بنين	127
14	15	30	4	2	34	1164	هاجر للبنات	128
14	15		29	4	29	531	وادي حجر للبنين	129
17	15	30	2	1	32	140 7	التاريخ للبنات	130
18	15	4	30	4	33	822	المزمل للبنين	131
7	15		22	6	22	485	سهل بن عمرو للبنات	132

الاسم	عدد الطلاب	عدد المعلمين	عدد المحاضرين	المعلمون تكرر	البنات	المعلمين الاختصاص	معلمين الاختصاص العام
1	الوطن للبنين	366	6	30	10	30	30
2	القحطانية للبنين	730	4	40	12	33	33
3	العراقية للبنين	290	4	30	15	15	15
4	الثورة م /	833	7	50	20	30	30
5	الرافدين للبنين	700	7	44	15	29	29
6	ابن سينا للبنين	645	7	22	10	12	12
7	المعري للبنين	436	2	20	18	18	18
8	حطين/1/ للبنين	575	2	43	15	10	10
9	ابن زيدون للبنين	530	3	30	15	15	15
10	القدس للبنات	427	4	30	15	1	1
11	سعد بن ابي وقاص للبنين	905	5	44	15	24	24
12	المنصور للبنين	535	3	44	15	29	29
13	ابن فراس الحمداني للبنين	725	3	44	15	27	27
14	الامام احمد بن حنبل للبنين	358	3	32	15	17	17
15	ذات الصواري للبنين	901	1	44	12	32	32
16	عمار بن ياسر للبنين	709	1	55	13	42	42
17	ابي عبيدة الجراح للبنين	933	2	45	15	30	30
18	الشهداء للبنين	395	1	33	3	3	3
19	العدنانية للبنين	855	3	30	14	16	16
20	الهدى م /	291	3	30	20	10	10
21	الصادق للبنات	956	7	50	22	28	28
22	موسى الجديدة للبنات	397	2	32	22	10	10
23	المنصور للبنات	800	2	52	25	27	27
24	الكواكب للبنات	389	3	32	22	10	10
25	الشهداء للبنات	730	1	23	22	1	1
26	الفلح/م/	488		22	22		
27	فلسطين م /	363	7	22	10	10	10
28	الظبية/1/ للبنات	483	25	لا يوجد	13	2	2
29	الميثاق للبنات	495	2	22	10	10	10
30	كنة للبنات	590	2	20	2	2	2
31	الاشتر للبنات	646	2	20	5	5	5
32	النهضة للبنات	769	2	20	5	5	5
34	عدي بن عبدالمطلب	654	20	لا يوجد	5	5	5
35	الاتصال للبنين	776	2	22	7	7	7
36	بردى للبنين	556	1	22	7	7	7
37	الجاحظ للتعليم الاساس	595	23	لا يوجد	8	15	15
38	اغدير للبنات	760	1	23	15	2	2
39	سيد الشهداء	613	24	20	8	4	4
40	الفارس العربي /1/ للبنين	700	7	22	15		
41	شظ العرب للبنات	710	32	لا يوجد	10	23	23
42	المواهب للبنين	512	22	لا يوجد	22		
43	التاميم للبنات	527	2	22	2	20	20
45	صفر قريش للبنات	855	1	20	20		
46	عتبة بن نافع للبنات	1309	1	33	19	14	14
47	القديس عبد الاحد للبنات	791	22	لا يوجد	7	15	15
48	الفاوق للبنين	714	52	40	22	30	30
49	الغرافد للبنين	440	32	2	15	15	15
50	ميسلون للتعليم الاساس للبنين	775	20	لا يوجد	5	15	15
51	ذو قار للبنين	702	1	24	9	15	15
52	الخمراء /1/ للبنات	755	1	28	13	15	15
53	الصحابية للبنات	720	1	55	25	30	30
54	الانصار للبنات	440	9	9	14	15	15
55	الفرطية للبنين	805	25	لا يوجد	10	15	15
56	ابن خلدون للبنين	663	2	52	22	30	30
57	المعتصم للبنات	558	2	52	22	30	30
58	النهروان للبنين	520	7	32	17	15	15
59	الامام البخاري للبنين	885	33	لا يوجد	18	15	15
60	التبع جميل منصور للبنين	775	32	لا يوجد	17	15	15
61	العامل للبنات	1017	55	4	40	15	15
62	الولاء للبنات	531	2	20	5	15	15

7	15		22	4	22	620	الوسيلة للبين	133
9	15		24		24	852	الكور	135
10	15		25	2	25	570	حل طراد البين	136
10	15	20		4	25	323	الحكاء للبين	137
5	15	20		6	20	713	الثوار للبينات	138
5	15	2	30	4	20	814	الساكن للبينات	139
12	15	2	30	5	32	922	الهادمين للبين	140
5	15	20		5	20	116	الافلاذ للبينات	141
7	15	22		4	22	354	الووق للبينات	142
5	15	20		5	20	170	الوطن للبينات	143
18	15	3	30	5	33	514	المكاسب ببن	144
5	15	20		1	20	730	المكاسب بنات	145
7	15		22	2	22	202	الحدياء ببن	146
5	15		20	2	20	430	شجون الصفا /	147
14	5	28	1	2	29	335	الزهراء للبينات	148
5	15		20	2	20	264	الكويت /11	149
7	15		22	2	22	595	برسد البين	150
7	15		22	2	22	341	النجاح ببن	151
7	15	22		1	22	352	المرافقة للبينات	152
12	15	27		2	27	363	حفصة للبينات	153
13	15		28	1	28	317	الاخلاص للبين	154
17	15		32	3	32	656	التقدم عام حسن بنات	155
9	15		24	2	24	395	الفرات ببن	155
18	15		21	لا يوجد	33	960	عزرو بن الجوع	157

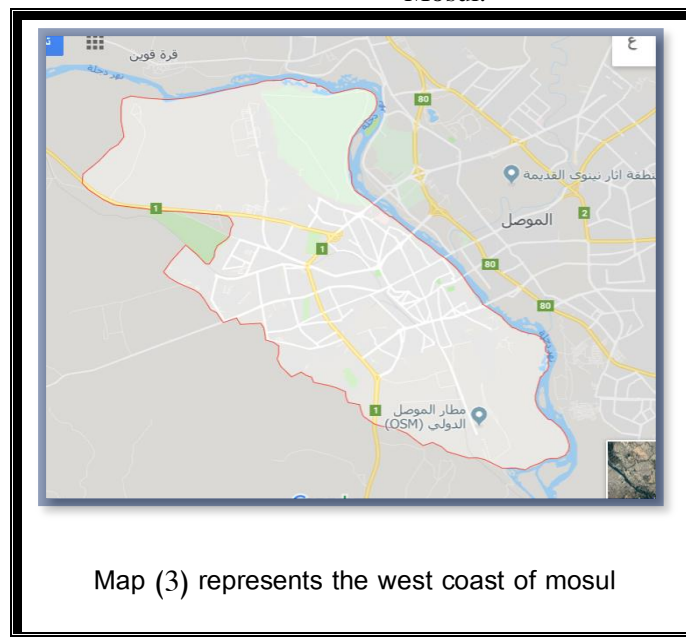
5	15	2	19	3	20	734	الشافعي للبين	63
2	20	22		لا يوجد	22	811	الكور للبينات	64
13	14	27		1	27	725	ميمونة 1 للبينات	65
17	35	3	49		52	438	الاورسي للبين	66
2	16	18		1	18	494	الزبير بن الحوام للبينات	67
19	25	4	40	2	44	1388	حلب للبين	68
3	40			2	43	708	الثوار للبين	69
2	18		20	7	20	687	حمزة سيد الشهداء	70
10	26	36		3	36	936	الشهيد داود السيد خليل للبينات	71
22	30	15	40	3	52	835	الشهيد نافع داود للبين	72
8	12		20	3	20	555	فبوخذ نصر للبين	73
15	10		25	3	25	731	بركة الرحمن للبين	74
10	30		40	3	40	655	الصحابية للبين	75
17	30	7	40	3	47	805	ابي تمام لم	76
4	30	34		3	34	778	ميسلون للبينات	77
16	14	30		3	3	869	الحضراء 2 للبينات	78
11	14		25	3	25	615	الاورسي 2 للبين	79
11	14		26	4	26	716	العامل للبين	80

Table (1) statistics directorate of Nineveh education in the numbers of primary schools, pupils, teachers and lecturers in the right coast of the province

the general teachers and the specialized teachers and the lecturers in each school and the supervisors.

Table (1) statistic of the education directorate of Nineveh with the numbers of the primary schools, pupils, teachers, and lecturers in the right side of the governorate.

Map (3) represents the right side of the city or what is called the western part of Mosul which, roughly, contains (50) inhabited quarters and it is called the ancient area of the city of Mosul.



In this study we have adopted the analysis of data via the (spss) system which aims at studying the efficiency of the educational

services and determining the suitable distribution of the schools in a way that suits the density of the population and discovering

the weak points of the educational process as well as improving the educational condition of the city. (7), from table no. (1), we find that the number of the schools in the right side of the city of Mosul is (157) school of which only (90) are occupied and have double classes and through our field tours in conducting this study we have noticed that (60) have triple classes in one building. Through our field tours to document some data and through the interviews conducted with a group of headmasters that works as one school in the building in a one-period-system, it has been noticed that they form a school that is well-

organized and clean and is distinguished with ease and quietness that are necessary for the pupils mentally. This would enhance the scientific level for the pupils much more than the schools that adopts the double or triple classes system. (8), (9). According to statistics, it has been shown that the number of the boys who occupy these schools is (61624) distributed on (97) school and the number of girls who occupy these schools is (42777) distributed on (60) school of which are (4) that have evening classes. Table no.(2) shows a general description of the overall number of the pupils of the right side of the city.

الايمن طلاب اعداد		
N	Valid	200
Mean		691.1250
Variance		62770.954
Skewness		.619
Std. Error of Skewness		.172
Kurtosis		.342
Std. Error of Kurtosis		.342
Range		1237.00
Minimum		170.00
Maximum		1407.00
Percentiles	25	495.0000
	50	660.0000
	75	852.0000

Tables (2) general description of the numbers of pupils of the right coast

The number of the pupils in the right side of the city has been illustrated and represented in sketch no.(1). Whereas sketch no.(2) represents the number of the pupils of the right side graphically and are distributed according to the schools in the right side which shows the density of the pupils in these schools. It has been shown that there are schools with high pupil density and there are other schools,

however, with no such pupil density, rather the number of the pupils in some schools is very few if compared with schools such as (Al-Watan) schools for girls in (Bab-Lagash) quarter which has only (170) pupils, whereas (Al-Thariat) school in (Wadi-Hajar) for girls has (1407) pupils. This is just one example, and there are scores of such cases.



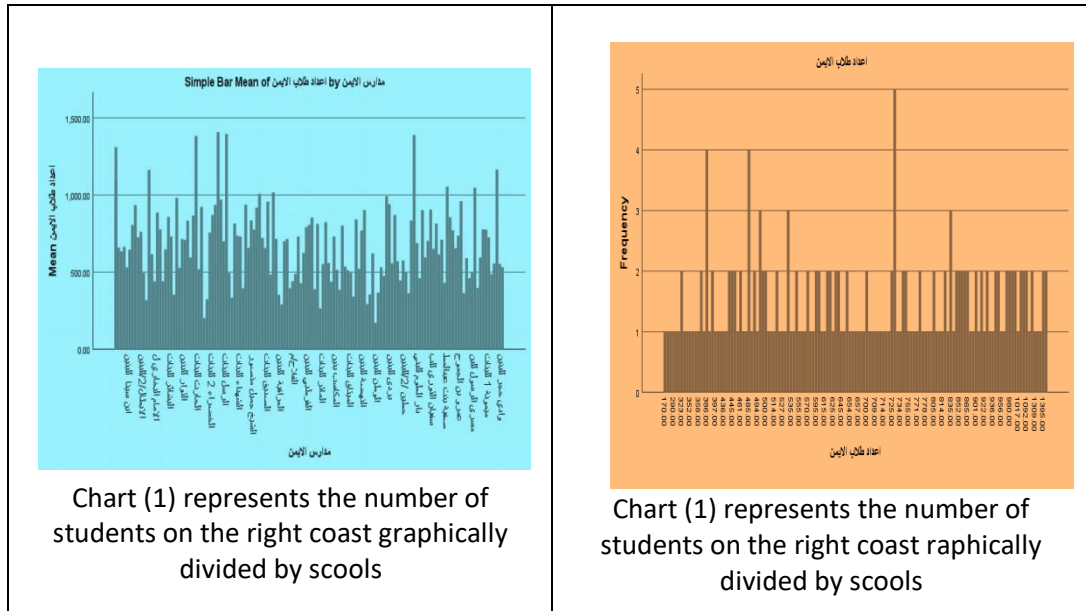
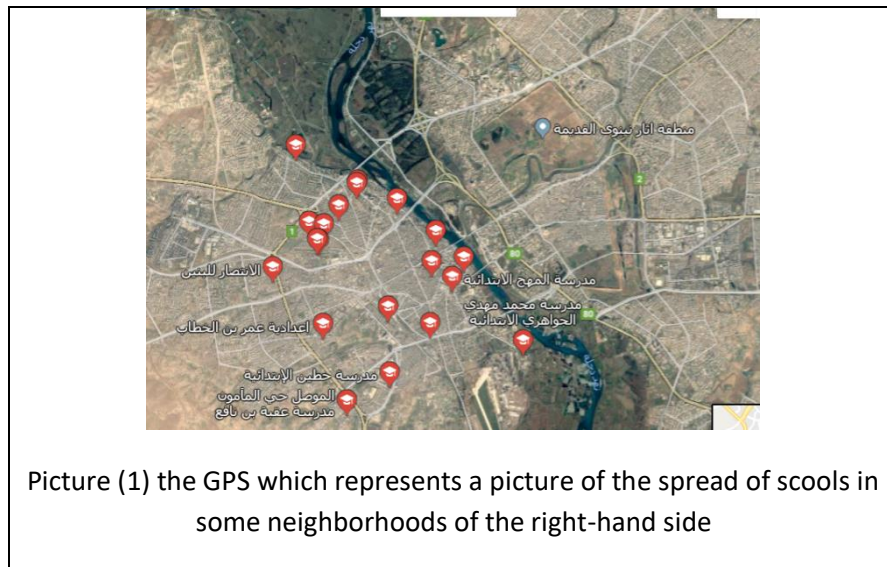


Chart (1) represents the number of students on the right coast graphically divided by schools

Chart (1) represents the number of students on the right coast raphically divided by schools

We have been able, thanks to the photos by the GPS, to see the density of schools in some quarters in the right side of the city and rarity



Picture (1) the GPS which represents a picture of the spread of schools in some neighborhoods of the right-hand side

in other quarters and the photo no.(1) illustrates some quarters such as (Al-Najar, Al-Rifaa, and Wadi-Hajar) and the density of schools in these places.

Photo no.(1) shows that there are considerable merging among schools especially in some of these places and this means that there are quarters lying within the service of more than one school. This is due to the density of the schools in the northern part of the side and the

reason behind that is that there has been a planning perspective that fits the educational reality in the city.

**Spatial Distribution of the Schools of the Left Side of the City:-**

The left side of the city is considered the new city of the city of Mosul, and when the city expanded the expansion in the left side was much larger than the expansion in the right side concerning the area and the

population; added to that is that the streets in the left side of the city are, in general, much wider than those in the right side. Table no.(3) represents the primary schools in the left side of the city of Mosul whose number is (271) for boys and girls some of which have double and

others have triple classes. The number of the pupils of these schools is (178293), along with the numbers of the general teachers and the specialized teachers and the lecturers in each school and the supervisors.



الصفحة	الاسم	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين	عدد المراجعين
12	11	32		4	23	835	الفردوس للبنات	135						
30	13	43		4	43	545	المحاربين بنات	136						
30	15		45	4	45	1125	عثمان الموصل بنين	137						
20		20		4	20	495	رابعة العنوية	138						
22		22		4	22	432	التخيل بنات	139						
20	2	22		4	22	891	شرحيل بن حسنةبنات	140						
14	8	22		4	22	468	يافا بنين	141						
28	17	45		4	45	908	الفراهيدي بنات	142						
30	144	44		4	44	703	الفادسية بنات	143						
20	2	22		4	22	406	المهوج بنات	144						
20	2		22	4	22	480	منارة الموصل بنين	145						
20	5	25		4	25	420	محمد الدرا بنات	146						
15	7		22	4	22	432	العطاء بنين	147						
30	13	43		4	43	421	قبة الصخرة بنات	148						
15	10	25		4	25	650	الزيتون بنات	149						
20	6		26	4	26	458	الفداء بنين	150						
20		20		4	20	660	ابن رشد بنات	151						
26	9	35		2	35	945	التليل بنات	152						
20	13	33		2	33	642	عمر المختار بنات	153						
20	13	33		2	33	792	العابدي بنين	154						
20	13	33		2	33	850	عاصم بن ثابت بنات	155						
20	12	32		2	32	766	عبد الوهاب الشواف بنين	156						
20	14	34		2	34	800	زهرة المدائن بنات	157						
20	7	27		2	27	490	الشهباء بنين	158						
20	9	29		2	29	541	زبيدة 2بنات	159						
20	5	25		2	25	560	الصاديد بنات	160						
20	3		23	2	23	403	عتبة بن فرقد بنين	161						
20	24	40	4	2	44	795	الاربيجية بنات	162						
30	15		45	2	45	1242	الذري بنين	163						
20	7		27	2	27	832	اسامة بن زيد بنين	164						
40	10	50		2	50	1219	يارمجة بنات	165						
20	4	24		2	24	515	الحداد بنات	166						
20	4	24		4	24	650	البيارق بنات	167						
20	5	25		4	25	533	الانتفاضة بنات	168						
20	5	25		4	25	636	أفرا بنات	169						
20		20		4	20	330	الهاشمية بنات	170						
30	20	50		4	50	1004	المكارم بنين	171						
20		23		4	23	688	المامون بنات	172						
20	3	22		4	22	626	الشريف الرضي بنات	173						
20	2	22		4	20	810	المكارم 2 بنات	174						
20	2	22		4	22	480	موسى الكاظم م	175						
20	5	25		4	25	510	البواصل بنات	176						
20	2	22		4	22	989	محمد يونس السبعوي بنات	177						
20	30	50		4	50	901	مكة بنات	178						
20	20	20		4	20	639	الإصالة بنات	179						
20	18	38		4	38	769	الأزد بنات المستندة	180						
15	17		32	4	32	760	الكفاهات1/ بنين	181						
16	23		39	4	39	1060	الصحوه العربية للبنات	182						
13	10		30	4	30	350	المريدي 2/للبنين	183						
20	15		35	4	35	770	عبد الملك بن مروان بنين	184						
20	2		22	4	22	707	ماريا القبطية بنات	185						
20	12		32	4	32	629	قطر الندى بنين	186						
20	12		32	4	32	673	المصطفى للبنين المستندة	187						
30	20	50		4	50	1000	الترمذي / 2بنات	188						
20	2		22	5	22	459	المبين بنين	189						
14	19		33	5	33	696	غزة العربية بنين	190						
15	8		23	5	23	820	الإخاء بنين	191						
13	8		25	3	25	735	الضياء للبنين	192						
12	7	25		5	25	415	اليقين للبنات	193						
12	8	23		5	23	728	العودة 2/ بنات	194						
		22		2	22	460	التضال بنات	195						
11	9		20	2	20	490	سيف الرسول للبنين	196						
16	4	20		2	20	361	لبابة بنت الحارث للبنات	197						
		20		32	20	545	الوحدة بنين	198						
20		20		3	20	421	المتنبي بنين	199						
20	2		22	3	22	792	قباء بنين	200						
20	5	25		3	25	443	الموصل بنات	201						
20	2		22	3	22	721	الشريف الرضي بنين	202						
20	30	10	40	3	50	449	الوحدة بنات	203						
20		20		3	20	644	غزة العربية بنات	204						
20			20	3	20	341	دجلة الخير	205						

20			20	3	20	411	الحرية/2 للبنين	206	24	1		25	2	25	296	النوار بنت مالك	84	
17	5		22		22	557	الجامعة للبنين المستندة	207	20	4	24		3	24	560	يارفا بنات	85	
17	3	20		4	20	371	الابرار بنات	208	20	6	26		2	26	623	الكفاءات/1بنات	86	
16	14	33		4	33	806	الميادة/2 بنات	209	24	3		27	لا يوجد	27	710	سعد بن عبادة بنين	87	
17	14	24			24	616	التقوى للبنات	210	20	9		29	لا يوجد	29	805	عمر المختار بنين	88	
17	13		23	3	23	405	القيس بنين	212	20	7		27	5	27	622	الجهاد والبناء	89	
10	13	23		3	23	682	الاخاء بنات	213	20	12		32	5	32	505	افرا بنين	90	
12			22	3	22	715	عبد الله بن جابر للبنين	214	20	5		27	5	25	312	بلال الحيتي	91	
17	3			3	20	348	الهداية	215	20	7		27	5	27	639	المكارم بنات	92	
17	3	20		3	20	515	اسعد بن زرارة بنين	216	20	8		28	5	28	599	عتبة بن غزوان	93	
17	3			3	20	203	الشهيد نمير نور الدين	217	20	5	25		5	25	450	بنات الحسن	94	
17	5	22		3	22	712	قيام بنات	218	20	5	25		5	25	683	عز الدين القسام بنات	95	
17	5	22		3	22	513	زيد بن ثابت بنات	219	30	24	6	50	5	56	1012	عمر بن العاص بنين	96	
20	12		32	3	32	617	الامام الزهري للبنين	220	20	6		26	5	26	630	صاحب الحوت بنين	97	
20	12	2	30	3	32	870	حراء للبنين	221	20	5	25		5	25	810	عبد الوهاب الشواف بنات	98	
20		20		3	20	847	منى للبنات	222	33	16	9	40	5	49	1198	الفرهيدي بنين	99	
20		20		3	20	604	ام الدرداء للبنات	223	20	7		27	5	27	800	شرحبين بن حسنة	100	
20	3	23		3	23	732	المبراة	224	25	7		32	32	32	550	الهادي بنين	101	
20	2		22	3	22	350	البقيع بنين	225	24	9		33	2	33	729	النعمان بن المنذر	102	
20		20		3	20	393	الاعراف بنات	226	23	2		25	2	25	661	عاصم بن ثابت بنين	103	
20		20		3	20	354	البقيع بنات	227	30	15		45	45	45	1264	ناظم الطيولجي بنين	104	
20	5		25	3	25	592	عبد الله بن عمر	228	25	8		33	33	33	885	الفرقان بنين	105	
25	25		50	7	50	1037	البيروني	229	25	9		34	3	34	577	زيد بن ثابت	106	
30	15		45	3	45	1100	زيد الخير	230	20			2	5	23	460	الشهيد مجد الدرة بنين	107	
40	5	45		3	45	556	سمية بن خطاب	231	20	3				23	626	الارقم بنين	108	
14	16	30		3	30	685	الشهيد عايد غازي للبنات	232	23	3		26	3	26	486	القوتيين	109	
12	20			3	30	797	سلمى بنت قيس	233	20	5		25	5	25	646	مارب بنات	110	
14	20	34		3	34	997	البديع بنين	234	25	1		26	3	26	333	الجماهير بنات	112	
20	22		42	3	42	930	المعراج/م	235	25	3		22	4	22	651	سومر بنات	113	
20	12		32	3	32	591	اجنادين/م المستندة	236	25	25		2	2	25	626	الفراتين بنين	114	
17	5		22	3	22	714	عروس الصحراء	237	20	2		22	2	22	450	الاسراء بنات	115	
15	14		29	3	29	460	القنوة الحسنة	238	25	4		29	2	29	880	الترمذي للبنات	116	
15	10		25	2	25	689	سعيد بن جبير بنين	239	20	2		22	5	22	285	ابي ذر القرظي بنت	117	
15	10	20	5		25	572	القنوة الحسنة للبنات	240	20	2		5	22	566	عز الدين القسام	118		
15	7	2	20	2	22	754	الطبري للبنين	241	25	18		43	5	43	608	الجنان بنات	119	
15	15	28	2	2	30	631	الطبري للبنات	242	25	18		43	5	43	908	القعقاع بنات	120	
15	15		30	2	30	443	يوسف بن تاشفين للبنين	243	20	2		22	5	22	542	الهادي بنات	121	
15	15	30		7	30	480	سبل السلام للبنات	244	20			22	5	22	366	الباقرات الحموي بنين	122	
15	14	29		4	29	541	الزران للبنات	245	20	2		22	5	22	325	المروج بنات	123	
15	10		25	6	25	640	صناع الحياة للبنين	246	20	5	25		5	25	480	المثني بنات	124	
15	8		23	4	23	713	مجمع الحدباء بنين	247	20			25	5	32	585	نسمة النصرارية بنات	125	
15	17	32		5	32	546	مجمع الحدباء بنات	248	20	12			5	22	485	عبد القادر العبيدي بنين	126	
15	18		33	4	33	450	ذو الفقار للبنين	249	20	2	22		5	22	414	خالد بن الوليد بنات	127	
15	15		30	5	30	516	الشهيد رعد الحيلي للبنين	250	20			32	5	32	375	الحسن البصري بنين	128	
15	15	30		4	30	415	الامام الزهري بنات	251	20	13		23	45	23	244	الخامعل بنين	129	
15	41	50	6	4	56	1259	المعراج للبنات	252	20	12		32	4	32	778	المعالي بنين	130	
15	10		25	6	25	609	عمير بن سعد	253	20			32	4	32	319	الامام مجد الرضواني	131	
15	17		32	6	32	320	المعالي/2	254	20	20			4	20	631	الكرمين بنين	132	
12			12	6	12	14	ثانوية الموهوبين	255	20			23	4	23	434	التعمالية بنين	133	
20	10	30		4	30	240	الكويت/7 بنات	256	30	30	54		4	54	1308	رغبة الاسلامية للبنات	134	
20	5		25	2	25	232	الكويت/7 بنين	257										
20	9	29		6	29	429	الكويت/8 بنات	258										
17	3	20		6	20	420	الكويت/9	259										
19	13	25		2	25	686	الكويت/10 بنات	261										
12	13		25	5	25	568	الكويت/10 بنين	262										
12	13		25	3	25	457	منهل العلم بنين	263										
12	21	30	3	4	33	505	البيت السعيد بنات	264										
12	13		25	3	25	443	الجيل الصالح	265										
12	12	24		4	24	404	عراق الحضارات بنات	266										
12	13	25		3	25	377	ريحانة الرسول بنات	267										
20	24		44	5	44	433	الشيماة/2 بنين	268										
10	20		22	5	22	630	صاحب الحوت بنين	269										
12	13		25	5	25	486	نهضة الموصل	270										
10	40	10	40	5	50	801	العقيق	271										

Table (3) statistics directorate of Nineveh education in the numbers of primary

schools,pupils,teachers and lecturers in the left coast of the province

Table (3) statistic of the education directorate of Nineveh with the numbers of the primary schools, pupils, teachers, and lecturers in the left side of the governorate.

Map no.(4) represents the left side of the city or what is called the eastern part of the city of Mosul with inhabited quarters of approximately more than (70).



From table (3), we notice that the primary school number in the left side of the city of Mosul has reached (271) school which occupied only (140) building and which have double classes. According to our field tours when conducting this study we noticed that (40) school have triple classes in one building if compared with the right side. The primary

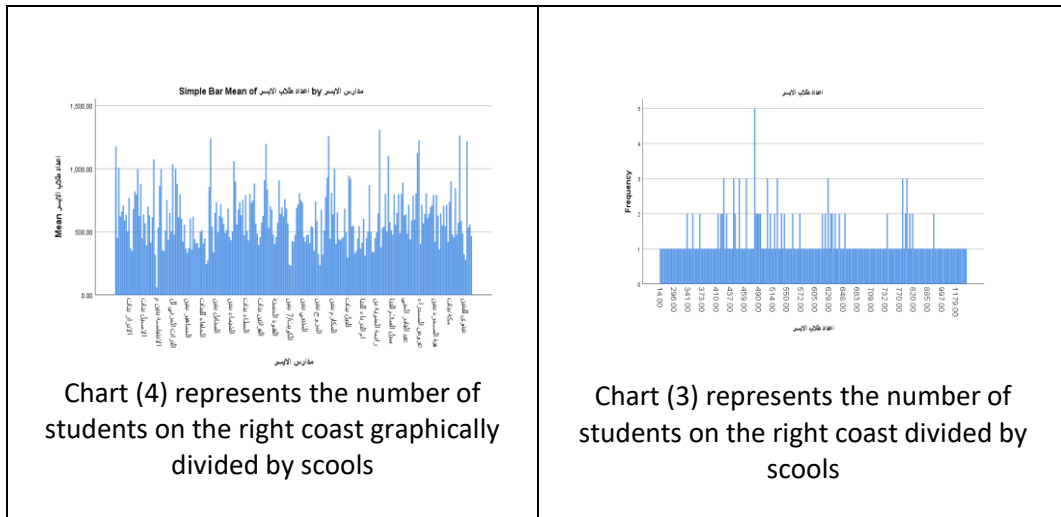
schools for boys are (150) school. According to statistics the number of boys in these schools is (88219). The number of the primary schools for girls is (121) and the number of the girls in these schools is (90074). Table no.(4) represents a general description of the numbers of pupils in the left side of the city of Mosul.

		اعداد طلاب الايسر
<b>N</b>	<b>Valid</b>	<b>270</b>
<b>Mean</b>		<b>606.2852</b>
<b>Variance</b>		<b>49164.703</b>
<b>Skewness</b>		<b>.712</b>
<b>Std. Error of Skewness</b>		<b>.148</b>
<b>Kurtosis</b>		<b>.721</b>
<b>Std. Error of Kurtosis</b>		<b>.295</b>
<b>Range</b>		<b>1294.00</b>
<b>Minimum</b>		<b>14.00</b>
<b>Maximum</b>		<b>1308.00</b>
<b>Percentiles</b>	<b>25</b>	<b>448.5000</b>
	<b>50</b>	<b>572.5000</b>
	<b>75</b>	<b>729.7500</b>

Taples (4)general description of the numbers of pupils of the left coast

The number of the pupils has been represented graphically in sketch (3). Sketch no.(4) represents the number of the pupils in the left side distributed according to schools which illustrate the distribution of pupils in

schools. It has been seen that there are (11) school the number of the pupils in each school is more than (900) and the rest of the schools have between (300-850) pupil.



We have been able to see, thanks to the GPS photos, the distribution of the schools in some of the quarters of the left side and the photo no.(2) is an instance. According to the latter, one can see the

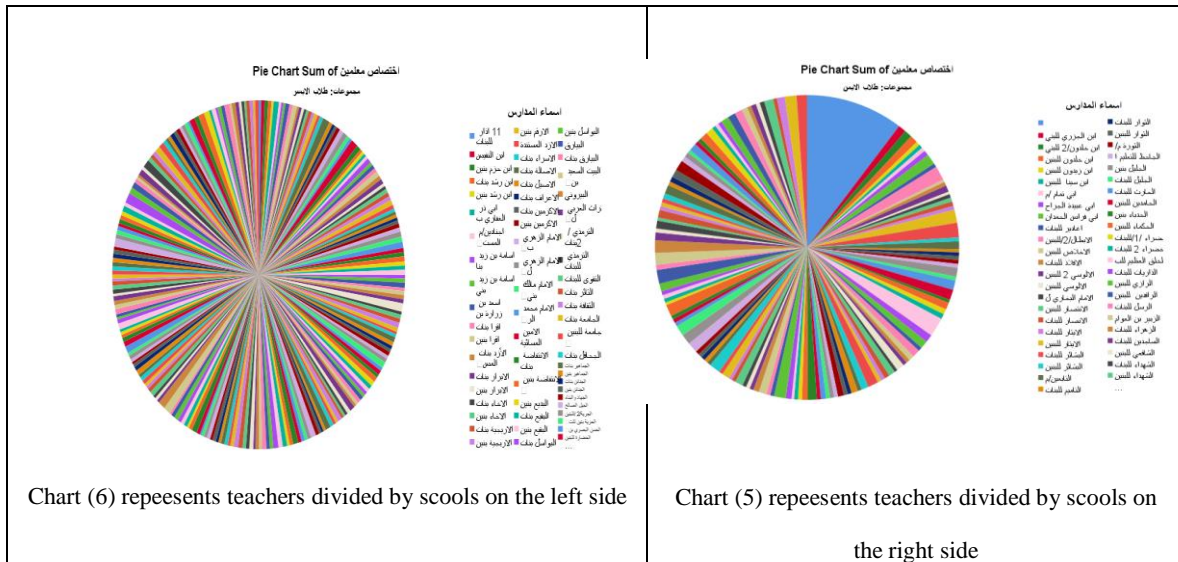
distribution of schools in some quarters suitable and fits the population density of those quarters somehow.



**The Conditions of Teachers and Lecturers in the Governorate:-**

The number of teachers in the governorate schools in general has reached (1083) male and female teachers. These teachers are distributed on (428) school. The share of the schools of the right side has reached (4608) teacher of them are (2696) male teacher and (1912) female teacher. The number of the male and female teachers in the schools of the left side has been (7838) distributed in all schools in the left side, the number of the male teachers has been (4615)

and the number of the female teachers has been (3223). The planning standard has specified that there is a teacher for every (22) student in Iraq in the governmental schools. As for the governorate of Nineveh, the number of teachers as compared with the number of the pupils is good and serves the educational process. The teachers of the right side who are distributed according to schools are illustrated in sketch no.(1) and the teachers of the left side who are distributed according to schools are illustrated in sketch no.(6).



The number of the lecturers of the right side has been (953) and the number in the left side

has been (455). A table for both lecturers is made as in the graph table (5).

مجموعات		Frequency	Percent	Valid Percent	Cumulative Percent
الايمن طلاب	Valid 1.00	59	29.5	29.5	29.5
	2.00	45	22.5	22.5	52.0
	3.00	35	17.5	17.5	69.5
	4.00	32	16.0	16.0	85.5
	5.00	11	5.5	5.5	91.0
	6.00	4	2.0	2.0	93.0
	7.00	13	6.5	6.5	99.5
	8.00	1	.5	.5	100.0
	Total	200	100.0	100.0	
	الايسر طلاب	Valid 1.00	24	8.9	8.9
2.00		55	20.4	20.4	29.3
3.00		71	26.3	26.3	55.6
4.00		70	25.9	25.9	81.5
5.00		42	15.6	15.6	97.0
6.00		6	2.2	2.2	99.3
7.00		2	.7	.7	100.0
Total		270	100.0	100.0	

Tables (5) represents right and left lecturers

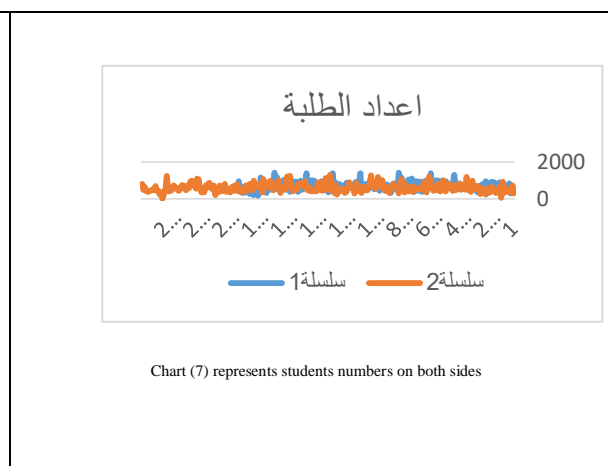
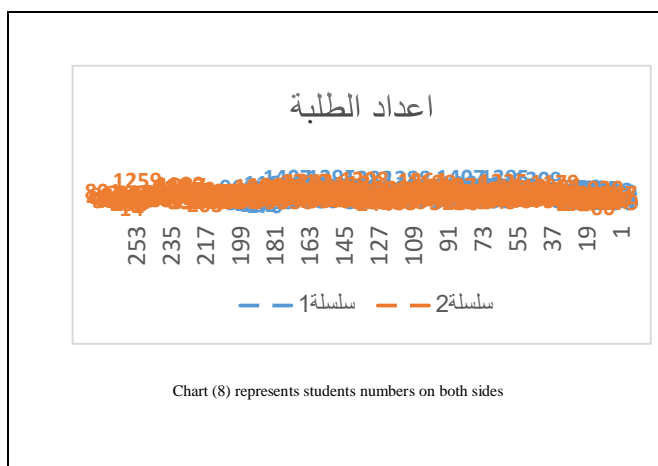
The number of the specialized teachers in the right side has reached (2810), and the number of the general teachers has been (1799). The number of the specialized teachers in the right side has been (3074). The data have been presented statistically in table (6) which shows the rates and numbers of the general and specialized

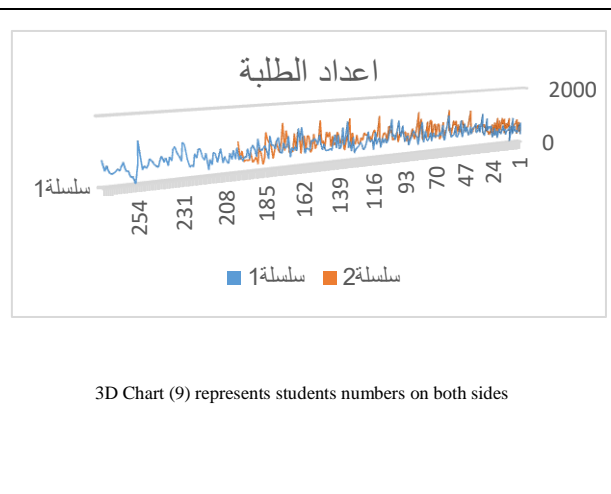
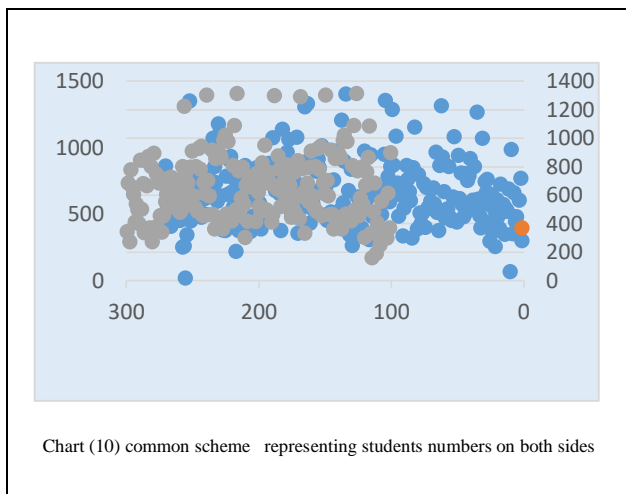
side has been (4764) and the number of the specialized teachers in the left side has been (3074).

teachers in both the right and left sides of the city.

Statistics						
مجموعات		معلمين	محاضرين	اختصاص	عام	
الايمن طلاب	N	Valid	200	200	200	200
		Missing	0	0	0	0
		Mean	30.5550	2.8000	18.1250	12.5100
		Range	37.00	7.00	30.00	41.00
		Minimum	18.00	1.00	10.00	1.00
		Maximum	55.00	8.00	40.00	42.00
الايسر طلاب	N	Valid	270	270	270	270
		Missing	0	0	0	0
		Mean	29.3444	3.2852	19.3778	11.3481
		Range	44.00	6.00	30.00	144.00
		Minimum	12.00	1.00	10.00	.00
		Maximum	56.00	7.00	40.00	144.00

Table (6) represents teachers of the year, specialists and lecturers of the right and left coast schools





The number of the students has been illustrated more clearly in the two sketches (8,7), in which the red colour represents the number of the pupils in the left side of the city and the blue one represents the number of the pupils in the right side of the city.

Sketch no.(9) is also a three-dimensional one illustrating the number of the pupils in both sides whereby we notice high pupil density in the right side when compared with the left side.

In sketch (10), there is an illustration of the form of the spread of schools in both sides. The red colour signifies the density of schools in the left side whereas the blue colour refers to the density of schools in the right side.

Depending on the previously mentioned tables, statistical data, and sketches we have been able through this study to come up with a graphic study between the schools of the right and the left sides of the city of Mosul. We have tackled the most prominent obstacles in both sides concerning the number of the schools and the number of the pupils who occupy these buildings. Besides, we have made a statistic with the number of the general teachers, specialized teachers, lecturers, and supervisors. Table no.(7) represents a shared analysis for the pupils of both the left and right sides of the city.



**Conclusions:-**

From the study we have conducted and thanks to the field visits and the data provided by the ministry of education in Nineveh governorate, also through the statistic analyses and data we have completed in addition to the graphic sketches and the

illustrating photos, we have come up with results that we can discuss and we exert

intensive efforts to put them in the hands of the responsible authorities to lessen the agony of the pupils and enhance their educational level. Among the problems we have

reached at is that there is a clear shortage in primary schools in the right side of Mosul city

		Descriptives			
		مجموعات	Statistic	Std. Error	
الايمن طلاب	الطلبة اعداد	Mean	691.1250	17.71595	
		95% Confidence Interval for Mean	Lower Bound	656.1899	
			Upper Bound	726.0601	
		5% Trimmed Mean	678.8667		
		Median	660.0000		
		Variance	62770.954		
		Std. Deviation	250.54132		
		Minimum	170.00		
		Maximum	1407.00		
		Range	1237.00		
		Interquartile Range	357.00		
		Skewness	.619	.172	
		Kurtosis	.342	.342	
		الايسر طلاب		Mean	606.2852
95% Confidence Interval for Mean	Lower Bound			579.7176	
	Upper Bound			632.8527	
5% Trimmed Mean	595.6626				
Median	572.5000				
Variance	49164.703				
Std. Deviation	221.73115				
Minimum	14.00				
Maximum	1308.00				
Range	1294.00				
Interquartile Range	281.25				
Skewness	.712			.148	
Kurtosis	.721			.295	

.Table (7) represents a joint analysis of pupils on the right and left coast

when compared with the pupils in that area. This side contains only (157) school with (104401) pupil, also there is shortage in female schools in the right side, the number of these schools is (60) only with (42777) pupil, whilst the number of the primary schools for boys is (97) with (61624) pupil. The left side of the city, however, suffers from the same problem; the number of the pupils is (178293) occupying (271) school only. There is also a shortage in the number of the primary schools for girls in the left side of the city, the number of these schools is (150) with (90074) pupil. Added to that is that the schools that have double classes system and triple classes system are many if compared with those schools that have a one-classes-system in either sides. The

ample number of schools in some quarters and the scarcity of schools in other quarters or sometimes absence of schools in some quarters. There are schools that have many pupils attending classes whereas there are other schools that have very few pupils attending classes, for instance (Al-Jaleel) school for girls in the right side has (1382) pupil, whereas (Al-Watan) school which is also in the right side has only (170) pupil; the school of (Nineveh) for boys in the left side has only (279) pupil, whilst the Islamic school of (Rufaida) has (1308) pupil (8). It has been noticed that there are many lecturers giving lessons for free in all the schools of the governorate the thing that hinders the educational process in the right manner. This

has made most teachers depend on these lecturers in giving lessons. It has been also noticed that there are few specialized teachers if compared with general teachers and this especially clear in the schools of the right side of the city which noticeably weakens the educational process.

#### Recommendations:-

The building of primary schools differs from the building of other schools; because of the special conditions of the pupils of this stage and the various age groups.

The system of double schools, more than one school in one building, makes it possible to change the places of some schools by others to benefit from school site.

To benefit from the vacant areas in the right side of the city to build new schools.

The destruction in the right side ought to be taken into account via providing private transportations for pupils from the quarters in which there are surplus schools until building schools in the quarters that have no schools due to the destruction state.

There should be suitable distribution of teachers and lecturers in both sides of the city; they are greater in number in the left side than in the right side. Also the large number of teachers in some schools and the scarce number of the teachers in other schools in a way that does not fit the number of the pupils in the one school.

The lecturers for free should be employed so that they continue the educational process in a good and sound manner.

Increasing the number of the field visits to the schools of the right side of the city for

these schools are badly in need of guidance and back up, this is on the part of general supervisors and specialized supervisors.

There should be specialized teachers in schools in a way that suits the number of classes, pupils, and the basic materials.

It is necessary to make visits to schools to enhance the awareness of pupils and giving them advice and instructions from time to time for pupils in this age stage record information. The specialized authorities should invest this stage to prepare a new generation to rebuild their country and to rely on this generation so as to achieve advancement and prosperity.

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