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ANALYSIS OF EDUCATIONAL FACILITIES BY LOCATION GEOGRAPHIC INFORMATION SYSTEM (GIS), (CASE STUDY: PRIMARY SCHOOLS IN ZABOL)

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ABSTRACT
The main goal of urban land use is planning, economic and social welfare of the citizens according to criteria such as location, compatibility, comfort, performance, utility, health and Safety standards. The planning effort that urban land use patterns determine the location of various activities and urban systems is in harmony with each other. In fact, the main theme of urban planning is organizing the city based on social justice, efficiency and environmental quality, the location is particularly important activity.

In order to locate the desired application requirements, the use of GIS is very useful because it facilitates compliance drummer capacity constraints are clearly visible (Taleshi, 2007). Evolution of GIS in recent years has led to an accepted tool for managing spatial data analysis used (Tajvidi, 2002). As a result of the integration and combination of measures, the best choice would be the optimal place for the establishment of centers (Pourahmad, 2008).

Much of these problems can be with a plan for optimized distribution of schools in the city, as well as the level of per capita for each of the Degrees solved. According to the importance and the effect that can be the subject of study and the educational levels of Zabol the town development is clear.

Preliminary studies indicate that the distribution of Zabol and the physical expansion of educational facilities in this section is not desirable schools in preventing the use of proper planning comes to public services, particularly educational spaces.

Keywords: Analysis, Educational, Location geographic, Primary

INTRODUCTION
Research Purposes: The overall objective of this research is to help create the right conditions for the establishment of educational applications in the study area in order to educational services and applications so that a more functional coverage there needs to be a better use of existing facilities and services. Locating a suitable model based on a combination of theory and method. Geographic theory and utilizes software to take appropriate decisions, this decision will enable the city to have a systematic and more quickly than in the past, better quality and no previous convictions.

Operational Objectives
1. The pattern of primary school education in the Zabol spaces.
2. Evaluation of the educational establishment located in the city of Zabol according to criteria provided by the modernization the hypotheses of this research are:
, expansion v schools
3. The suggested model of the proposed new schools as well as schools in need of improvement with regard to the criteria and standards location.

Research Questions
Is the spatial distribution of Zabol city schools done on the principles and standards of educational facilities location?

Hypotheses
1. It seems that the spatial distribution of Zabol primary school education has been done on the basis of user location.

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2. Distribution of primary schools in Zabol seems not to fit the needs of local communities.

Urban Planning

Urban planning is done in order to meet the needs of utilities, and consideration of economic and social factors in a comprehensive and dynamic system of urban planning, identify the policies and programs of urban development, coordination with other development programs at country and regional level adjustment programs and projects in a given time period (Ziyari, 2004).

Urban planning is a dynamic and because of its dynamics the city is like a living organism that affects some mechanism of the organism. Therefore, to meet the needs of municipal services and consider various factors in the economic and social status, a comprehensive and dynamic system of urban planning identify policies and urban development programs, coordination with other development planning at national and regional level, and programs and projects in a given time period, the special priority (Shia, 2004).

City and Various Urban Planning

Urban planning often emphasizes the following topics: (1) zoning, (2) housing; (3). Classification System streets, public buildings; (4). Green; (5). Facilities and transportation network; (6). Leisure centers, but the city also needs to plan and if they want a variety of programs to suit the quality of life of people in our study, we can refer to the following three major programs:

1. Urban planning, including the zoning and land use, housing, the provision of public transport facilities and functions of the building.

2. Economic Planning: Economic Planning for the development of civil society must take on more of the following:

A) Whether the economic recovery program, can be parallel to population growth, per capita income and raise living standards?

B) In the future, opportunities for employment growth in the number and type of skills would be proportional to the growth of the urban workforce, or a large number of unemployed or underemployed urban workforces spending the state?

C) The future development of the city limits, local revenues required to provide municipal services?

3. The social planning, community planning focuses on the development of human resources; a way which appears below:

A) Social Welfare and Family Support; b) healthy environment; c) training and education; d) Health; e) prepare the ground for citizen participation in various activities; and) support the poor and lower class and efforts to improve the lives of urban income (Shokoei, 2000).

Spatial Interaction Model

Modeling the interaction of spatial positioning for the assumption that occurs in situations of choice between shopping centers, markets, customers and market centers are attractive precedence. All other items are considered identical. Also, when shopping and Markets have similar absorption, will choose the best available. Model of spatial interaction models combine location and market penetration. The flow model in cost between the source (demand) and the destination (supply) is proportional to the power absorbed the point is compared to the other destinations. Second, the rate of flow between the source and destination point is proportional to the access point withal other destinations will be over. The current model of labor and capital from a residential area Assigned to a mall or market specific sales forecasts. The lifting of human capital, the dependent variable is the other variables in the equation include:

1. Demand in the designated area

2. The absorption rate and capital market

3. The cost of the trip or the distance between residential area or market or services

4. The level of competition in the area of market research and sales

Interaction space can be used as the flow of goods, labor, or information between locations defined (Diamond Poor, 2005).

Fuzzy Logic Model

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The inherent uncertainty of the environment, planning the assessment objectives and criteria of deciding on the one hand and inconsistency and inaccuracy in the opinions and judgments of decision makers on the other hand, led to the theory of fuzzy sets useful as an efficient tool for dealing with ambiguity. In such an environment and its mathematical formulation and program planning decisions taken (Amini, 2006). The complexity of planning, diversity and many problems that we face in the world today, Logic does not accept the one-dimensional orientation (ibid. 13).

Fuzzy logic of the new approach is to contribute to a more efficient and accurate analysis of the planning and decision. This approach has the ability to review and formulate mathematical concepts inaccurate definition of illness, Simulation, how human reasoning and decision-making and it is also possible to simulate the dynamics and uncertainties of the system without the need for detailed mathematical In terms of the ambiguous position (Amini, 2005). In fact, the solution of mathematical logic overcomes the uncertainty associated with human cognitive processes (Modest *et al*., 2010).

In this chapter, theories and models of location services were provided. The main research focus is: 1. does the spatial distribution of Zabol city schools based on the principles and standards of educational facilities location is done? And the 2. Does the distribution and establishment of educational facilities to suit the needs of the community? To answer these questions, you need to share and standards for Stations allocation of educational facilities and areas in which it is related to the theory of functionalism. To apply these standards the need for communication between the terrains is characterized by GIS In this research, including data fusion models overlap model parameters; Buffering model and AHP model are done.

Geographic and Demographic Characteristics of Studied Area

Check geologic features of Province of the geological structure is a manufacturer of various lithology. In terms of structural geology and continental crust, crust and oceans intermediate shell are tectonic unrest and tectonic activity of its features. From the Sistan region's tectonic sequence Helmand block is considered that much of the territory of Afghanistan is located. This block is in fact a tectonic Embayment the remnants of the Tertiary geological and As a result of tectonic movements and the time taken to form holes of the Helmand River alluvial deposits has accumulated. Of the territory of the North-South Up to 150 km from the east - west up to 100 km. Western boundary of the block is limited by a grave fault.

The overall results show that the result of the study of geological deposits regardless of a surface layer of coarse Zabul southern plains around reservoirs and wells can be seen half component essentially fine-grained sediments and clay and silt grains are generally superior. Based layers washable) or soluble salts (such as salt layer in the Layers seen Vegachi minor effect that is, changes in soil texture and sedimentary layers is limited and the general trend of the changes that Level of depth and South East to North West), the direction of water flow(Finer-grained sediments to the change (ibid., 14).

Sistan region, plain rocks of Tertiary geological remnants of the Seas As a result of tectonic movements hole has become the basis of Helmand a few other small river is deep and consists of clay to a height of over 500 meters above the Quaternary sediments. Khwaja Mountain is located in the southwest of Zabol stones of granite, basalt and more the dolerite. Most of igneous rocks of basaltic mountains Khwaja Zabol exterior. The minerals in rocks due to copper compounds, minerals, bentonite, and alunite Katvlyn Are formed. Besides the above, along with masses of granite stones that are transformed can be different minerals including Slymanyt, Dolomite, Kyanite and other secondary minerals (ibid. 17).

Study of Seismicity

In general it can be said that the movement of the layers of earth faults and vibrations that have a stake include: fault Nehbandan fault, fault and fault Minab Nain.

Study of Climate

Climate of the province despite the seasonal changes of climate during its many years Climatic conditions confirms the uniformity and the views of the desert and semi-desert climate is considered. Sistan region due to factors such as temperature, rainfall and humidity, or natural vegetation to be considered as a criterion for determining the climate zones, the climate is hot and dry.

Atmospheric pressure systems are the most important subtropical dry and like most arid regions of the solar radiation intensity and angle it to create a dry area in the summer prevents atmospheric fallout west

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or northwest and systems the Asian monsoon system. Well away from the sea and the absence of significant elevations although the area is not wet track winds exercise Have an important role in the development of such a situation. Classification "Kevin" who rainfall and The average annual temperature as a way to recognize the scope and Arid steppe climate and given the lack of equal average annual rainfall (in cm)The mean annual temperature (in ° C) and dry climate has set criteria. Given that the average rainfall in the city of Zabol than the average annual temperature is 27/0According to this classification, the city of Zabol placed entirely under dry and hot climate. Also based on the areas that do marten factor of 20 lower numbers the dry areas are classified, according to the stiffness coefficient of Zabol city is equal to 1/85. The city is clearly dry areas (comprehensive plan Zabul, 2005).

Sunshine Hours
Collect sunshine is shown in Table (3-4).
The 2002 to 2012 of 3167 hours per year of 3338 hours. According to figures station Zabol highest sunshine hours in the months of July, August and lowest in December it belongs. Sunshine observed ratio between the maximum possible sunshine hours in August than other months (the same).

Table 3-4: Search parameters Zabol city during 2012 – 2002

Total sunshine	Rainfall	Average relative humidity	Average minimum humidity	Average maximum moisture	Average temperatures	The absolute minimum temperature	The absolute maximum temperature	Year
3167.0	46.1	32.8	18.3	46.9	23.0	-10.0	48.0	1381
2814.0	17.1	33.8	18.6	47.5	22.9	-9.5	49.0	1382
3206.0	17.5	36.2	23.3	48.9	22.8	-3.5	47.0	1383
3345.0	10.3	38.7	21.2	55.8	22.6	-9.5	47.4	1384
3202.0	43.9	34.8	20.3	48.8	23.4	-5.2	47.0	1385
3457.0	15.7	32.5	16.9	47.9	21.9	-11.9	47.2	1386
3079.0	19.8	29.4	15.3	44.1	24.1	-4.5	49.6	1387
3368.0	40.9	34.1	19.3	49.1	23.3	-7.3	48.1	1388
3211.0	34.5	29.8	17.5	44.9	23.0	-6.4	48.2	1389
3328.0	30.9	28.1	14.0	42.1	23.0	-8.4	48.0	1390
3338.0	20.6	28.9	15.2	42.8	23.3	-6.8	47.7	1391

Source: same

Gender Distribution of the Population
Gender ratio for the city of Zabol in 2011, is equal to 4/101 that for every 100 females, there was a man 4/101. Sex ratio of total population in year 85 and 75 are respectively 104 and 103. The level of Sistan and Baluchestan Province in 2006 was equivalent to 106 to 106 and in the urban areas. The gender ratio

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of Zabol in 2011 than in the urban areas of the country, state and city had a lower figure (Statistical Center of Iran).

The gender ratio for the age group in the city of Zabol 14-0 105 years for the age group 15 to 64 years, and finally 7/102 to 5/107 persons ages 65 and older. The table below shows the gender ratio in urban and rural areas show Zabol city.

Table 3-5: The gender ratio of the population in the city of Zabol Province in 2011

Gender ratio (percent)	Index
101/8	The city of Zabol
100/6	Rural city of Zabol
101/4	Urban and rural areas of Zabol city

Source: General Census of Population and Housing, 2011, Statistical Center of Iran

The Average Number of Household Members
Based on data from the 2011 census, the total number of families living in Zabol over 33,957 households. Calculations show that with regard to the number of its population, Family to the city of Zabol in 2011, about 4/05 persons. In the 75's, on average 5.5 persons per household in the Zabul were living. So Zabol partly by reducing the number of family faced during this period. For 85 years, living in urban areas of the country to 3/89, for urban areas Sistan and Baluchestan is 5.27. Thus in 2006 the city of Zabolcompared to the national average, the average family size was higher but in 2011, then dropped again households in Zabul Is closer to the national average. As can be seen in general downward trend of the households in the city of Zabol and steadily declined (Statistical Center of Iran).

Table 3-6: Zabol living in urban areas compared to other areas in 2006

Family size	Index
3.89	Urban areas
5.27	Urban areas of Sistan and Baluchistan
4.5	(2006) Zabol

Table 3-7: Changes in household and family Zabol statistical period 2011-1966

Family size	Family	Year
5/01	3718	1966
4/94	5841	1976
5/49	13663	1986
5/5	17784	1996
4/5	30434	2006
4	33957	2011

Source: General Population and Housing Census 75 and 85 years, Iran Statistical Center and author calculations

Demographic Characteristics and Physical Divisions of Zabol Areas
Zabol based divisions Tash consulting engineers who prepared a detailed plan of the city is divided into 5 regions and 36 districts.

According to the General Population and Housing Census in 2011 had a population of 137,722 in Zabul This population of 39,420 people, equivalent to 28.6% of the total area of 2, with the share of the population, The most populous region of 4 to 5% share in 6980 is the most sparsely populated area. Areas of Zabol in the number of households do not have the distribution coordination So that the greatest number of households and families in District 2 with 9730 District 4 6980 households with the lowest number of households in the urban areas is capable (Statistical Center of Iran). Looking at the map of the city of Zabol triangulation becomes clear that Area 2 is the largest area compared to other areas 22/529

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hectares is equivalent to the smallest region in terms of area the region is an area of 5 hectares is equivalent to 9/275.

Table 3-8: General characteristics areas of Zahedan in 2011

Area (ha)	Number of households	Population	Description
418/12	8620	34920	District 1
529/22	9730	39420	District 2
348/4	8530	34547	District 3
395	1720	6980	District 4
275/9	5390	21855	District 5
1071/35	33957	137722	Total

Source: author

Planning and Location of Utilities
Over the past half century arose by uncontrolled urban problems. Lack of planning and research service based on user location led to timely and adequate and appropriate services. Therefore needs to be created with the minimum standards for allocation. These spaces were considered and Criteria were also used to predict the location of it. The ability to use computer systems and Empowerment programs in the field of multi-criteria decision making, Evolution of urban planning and assumed a greater speed So that in the GIS In recent decades it has played an important role in the attainment of the acquisition.
In connection with the city of Zabol, after collecting the required data, including maps and Demographics and field observations, existing schools were evaluated. As can be seen in Figure 4.1, a major part of the research data and Based spatial data in map form appears and Analysis of the different layers The thematic maps using GIS done Finally, the proposed map out the FAQ by city planners for the desired Educational spaces.
***Analysis of the Location Educational Spaces***
In the city of Zabol, there were 66 elementary schools Degree From this number, 43 are public schools and 23 private schools. Generally for-profit school student population of less than 150 and Have been established in all urban areas. Overall, only 16% of Elementary school students studying in private schools and the majority, about 84 percent of public school students are enrolled.

Table 1-5: The number of schools and student population within the city of Zabol in separation of ownership

Percent	Number of students	Number of schools	Type of school
41/9	7205	21	Boys public
41/6	7154	22	Public Girls
9/4	1611	13	NGOs Boys
7/1	1218	10	NGOs Girls
100	17188	66	Total

Source: author's calculations based on Statistics Department of Education in Zabol, 2013

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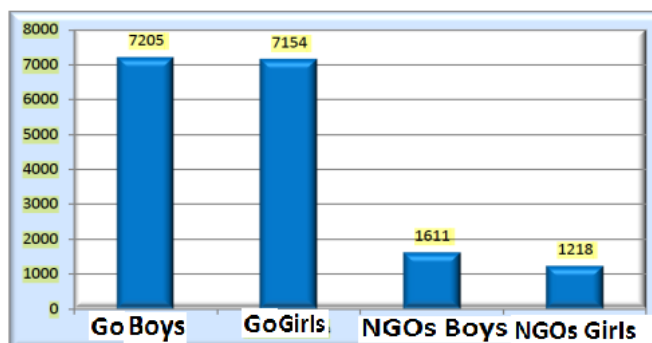
Figure 5-1: Population elementary students to gender ownership

Table 2-5: The number of schools and public secondary schools within the city of Zabol

School population	Classroom	School Name	Row
295	11	Imam Sajjad	1
375	15	Imam Jafar-e Sadeq	2
132	6	Imam Musa Kazim	3
230	10	Imam Reza	4
400	13	Shahid boys	5
650	21	Boys Farhangian	6
210	8	Primary school Pasdar	7
650	21	15 Khordad	8
380	12	Ghaem boys	9
425	12	EnghelabEslami	10
210	9	Dr. Chamran	11
462	17	JomhuriEslami	12
545	18	Esmail Mir	13
276	13	Shahid Ahmad Aghaz	14
320	13	Soluki	15
340	14	YaghubLeyth	16
125	7	Ayatollah Ashrafi	17
290	11	ShahidHoseini	18
390	17	Sarabandi	19
220	9	GolestanGhasemabad	20
280	11	ShahidHosein Shams	21
7205	268	Total	

Source: author's calculations based on Statistics Department of Education in Zabol, 2013

Table 3-5: The number of students in schools and public schools within the city of Zabol

School population	Classroom	School name	Row
90	6	HazratRoghayeh	1
190	8	HazratMasoomeh	2
530	20	Omal-banin	3
225	8	MarziehOzbashi	4
380	15	Be'sat	5
245	11	Mahdieh	6
370	13	Shahed	7
560	20	Farhangian	8
312	20	12 Farvardin	9
390	13	Efaf	10
330	12	Hadaf	11

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370	14	Zeynabieh	12
210	7	Nejat-e- Ghods	13
200	8	NakhaiMoghadam	14
350	14	Bentol-hoda Sadr	15
415	16	SakinehKhatoon	16
520	20	Etrat	17
457	16	Hijrat	18
135	6	ShahifSadooghi	19
220	7	Noor-e- Danesh	20
295	12	17 Shahrivar	21
360	13	Somayeh	22
7154	287	Total	

Among public schools, many students are more little boys 41/9 and 41/6 of the boys so that the percentage of female students account for the overall pattern of increasing the number of female students at all educational levels obeys. Among public school boys, the largest number of pupils on the school culture 650 students is studying the most sparsely populated school in the school 15 May with 90 students. Among public schools for girls, which is the largest school in the school culture Total 560 students are studying.

Table (2-5): The number of schools and private secondary schools within the city of Zabol

School population	Classroom	School name	Row
100	5	Seyyed al-shohada	1
60	5	javad al-A'emeh	2
67	8	Rastegaran	3
97	5	Shayestegan	4
200	6	Fadak	5
1990	6	Noavarannimrooz 1	6
250	8	Noavarannimrooz 2	7
210	7	Hamoon	8
125	6	Nikparvar	9
158	7	Danesh-e- Daneshgah	10
70	7	Shokufehay-e- Velayat	11
18	1	Mansour	12
67	6	Bagh-e- Danesh	13
1611	84	Total	

Source: author's calculations based on Statistics Department of Education in Zabol, 2013

Analyze the Compatibility of Educational Facilities
Once the necessary information is obtained from existing land uses, they can be used to analyze the problems relating to the establishment of training In relation to other users of the area specified. To this end, the criteria for locating the second chapter were applied.
Compatibility Criteria
To determine the compatibility or incompatibility with other users with adjacent educational applications, Standards and criteria should be considered in this context and Status of the study area are assessed. Members of the Are associated with educational spaces, in terms of adaptation into two main categories consistent and Division are incompatible Continue to check each of which is discussed within the city of Zabol.
Incompatible Applications Industrial Users

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Field studies examined land use map shows the city of Zabolin the range of Zabol any major industrial users there will be no air or noise pollution and Major industrial applications of light industry, Small workshops that do not create a disturbance.

User Communication and Transport Network Arterial Streets of 1

Arterial streets are the city of Zabol 1 in the public prior to the martyr St. the northwest of the city, the University Boulevard extends from the North West, Martyr Bahonar Blvd. from the South East of the city and finally martyr Mirhosseini Boulevard extends from the south of the city. After determining the degree of arterial passageways Privacy 150m to 1, it was determined that A number of schools located within this space. Looking at Table 5-8 and the map on the following page indicates that less than 50 m 2 school Arterial roads are grade 1 corresponding to a girl's private school students and Government boy's school of Imam JafarSadiq (AS). Overall, 6% of schools Less than 100 meters from the arterial roads in poor condition and are totally inappropriate.

Table 8-5: Number and percentage of schools in grades 1 Privacy arterial streets in the city of Zabol

Total	Compatibility Totally inappropriate	Inappropriate	Suited	Perfectly suited	School
21	1	1	-	19	Public boys
22	-	-	1	21	Public Girls
13	-	1	-	12	Boys NGOs
10	1	-	-	9	Girls NGOs
66	2	2	1	61	Total
100	3	3	1/5	92	Percent

Source: author's calculations

Arterial Streets Level 2

Arterial roads are grade 2 within ZabolHaider town boulevards martyr, martyr Mirhosseini and Mobilization and the streets of Imam Khomeini, ShaidMotahari, Heavenly martyr, Shahid Mofatteh Taleghani. The privacy practices of 100 m for these passages, it became apparent that a number of Educational buildings that are located in space. These schools include: Innovative Nonprofit noon to 2 boys, the girls, Ommolbanin, boys 15 May and Girls only Taleghani Avenue frontage of 40 meters is located. And female flowers in space 40 yards Boulevard martyr Mirhosseini Is located.

Other schools in the space below 40m Level 2 are being arterial streets Ghodsieh school, student, she Zbashy, Imam Sajjad, celebrities, Hananeh, migration and, with regard to the establishment of schools, it was found that 33.3% of schools in poor and Grade 2 arterial streets are totally inappropriate. The table below shows the status of schools located in 100 meters of space 2 shows the degree of arterial passageways.

Table 9-5: Number and percentage of schools located within the city of Zabol Privacy arterial passageways grade 2

Total	Compatibility Totally inappropriate	Inappropriate	Suited	Perfectly suited	Schools
21	2	-	2	17	Public boys
22	5	2	-	15	Public Girls
13	3	3	-	7	Boys NGOs
10	6	1	1	2	Girls NGOs
66	16	6	3	41	Total

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100	24/3	9	4/6	62	Percent

Source: author's calculations

Business

Major centers of trade, including market and passages that lead to the bustle and crowds Create noise and traffic problems will undoubtedly be neighborhood learning centers. At the intersection of Zabol martyr Mustafa and Hossein Tabatabai Venice intersection martyr Mostafa Khomeini Khomeini and market area is the major commercial applications have been located in this area.

With radius of 150 meters to the main commercial centers in relation to the school, it was determined that A number of schools are located in the space that is relevant the school of Imam JafarSadiq, HazratSakinaKhatoon. Other schools are in good condition. Table 5-10 Number and percentage of schools located in the sphere of business users.

Table 10-5: The number and percentage of schools located in the city of Zabol Business Policy

	Compatibility				
Total	**Totally inappropriate**	**Inappropriate**	**Suited**	**Perfectly suited**	**Schools**
21	-	1	1	19	Public boys
22	-	2	1	19	Public Girls
13	-	-	-	13	Boys NGOs
10	-	-	-	10	Girls NGOs
66	-	3	2	61	Total
100	-	4/5	2	92/5	Percent

Source: author's calculations

Benchmark Utility

Together these criteria, will determine whether the establishment of a training unit the urban fabric is placed in its proper position or not? And whether this relationship has taken place right? Knowing the answers to these questions depend on the type of activity, performance, User training requirements and reaction that due to environmental features and Access to the radius as well as the utility is examined.

Environmental Conditions

The environmental conditions, geographical features, climate, geology and topography of the region; in each of these cases, we will continue to investigate.

Climate

Weather where bereaves huge impact on the performance and quality of life, urban structure. Each climatic elements and parameters effects directly on the living conditions and determine the influence (consulting engineers, town homes, 2003). Zabol, Sistan region in terms of climate is not much different from those previously mentioned in Chapter III.

Ripples

General terms of slope, Zabol in plain smooth slope is very low, less than 1%. It is a small allotment sloping plain and Zabol in this area is established (Comprehensive Plan Zabul, 2005). So all schools in Zabol favorable conditions.

Measure of Capacity

In cases where the per capita criterion takes into consideration the capacity of training, students in the class density and frequency of use of educational spaces.

Capita Educational Spaces

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One of the goals of urban land use planning, provides adequate public services such as access to educational services. This space is dedicated to training Major differences in the various countries shows So that education equals 0/8 square meters per capita in Calcutta and in France on the development of new towns with 10 m^2. In our country, the standards for educational facilities for preschool, elementary, Help and secondary, respectively, per capita equivalent of 8, 9, 11 and 12 square meters (Almaspour, 2007).

According to the above standards, the per capita primary school section will be discussed.

Per capita is directly related to the area of a teaching unit. Iran school capita is generally less than the standards set by In addition, some schools because of low surface area, increasing the number of students makes To reduce the per capita allocation.

Standards, per school Primary education for every student section 9 square meters. The study determined that the existing schools in Zabul 74 per cent of schools in the area are less than 9 meters. The lowest per capita is about 2 square meters, which is related Public schools for boys and IR control School Farhangian and private schools for boys and girls, our knowledge and unique flowers.

Table 20-5: Land per capita in primary schools in Zabul

Total	The number of schools per capita than 9 m	The number of schools per capita than 9 m	Schools
21	6	15	Public boys
22	6	16	Public Girls
13	2	11	Boys NGOs
10	3	7	Girls NGOs
66	17	49	Total
100	26	74	Percent

Source: author's calculations based on data gathered by the Department of Education

The Analysis and Integration With GIS

After reviewing the current situation and analysis of findings The next step is the weight of the layers Due to high accuracy of the AHP, this software is used Will be described below.

Weight Layer Using AHP Model

The study of AHP based on paired comparisons and Or binary (Pairwise Comparisons) that makes it easy to judge the accuracy of calculations increases is used. The method in this case is after identifying the factors that place the issue of schools in the city of Zabol, Using AHP software and paired comparison method, using the experts the importance of each factor, and their weight was calculated Using Geographic Information System Based on Weight modulator maps, final map was produced.

This software layer that is applied to the weight of the environment is as follows:

1.User compatibility with other educational uses arterial streets 2. 3. Arterial passageways second grade. Table (22-5) layers required to indicate the weight in order of importance.

Table 22-5: Layers required for entry to the priorities in AHP

The layers of assessment	Number

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Land Use	1
Arterial streets Level 2	2
Arterial streets of 1	3

Source: author's calculations

These layers are paired in the application of the AHP Placed. Paired comparison of this table is to User Adaptation Layer in this study that the most effective training With other land uses, the next layer is measured by the here 3 layer is selected and Compatibility layer 2 and layer comparison Similarly, the next layer with other layers of two compared Placed. Table (23.5) shows the comparison of these layers.

The final impact priority than other layers, its weight is determined. It should be noted that this is achieved if the reliability of the final matrix (CI) is less than 0/15, 0/04 is acceptable in this study. The total weight of the layer is equal to 1.

Table 23.5: Compared with the other layers on the basis of AHP

Layers evaluated	Arterial streets Level 2	Arterial streets of 1	Arterial streets of 1	Layers evaluated
Extremely high importance				Extremely high importance
Greater importance				Greater importance
High importance				High importance
Insignificant				Insignificant
Equal importance				Equal importance
Insignificant	⊙			Insignificant
High importance				High importance
Greater importance			⊙	Greater importance
Extremely high importance		⊙		Extremely high importance
Layers evaluated	Land use	Land use	Arterial streets of 2	Layers evaluated

Source: author's calculations

Table 5-25: Comparison matrix layers together

Arterial streets of 1	Arterial streets Level 2	Land use	
9	3	1	Land use
7	1	0/333333	Arterial streets Level 2
1	0/142857	0/111111	Arterial streets of 1
Confidence = 0408636/0			

Source: author's calculations

Table 5-26: The final weight is calculated by the software layers of the AHP

Weight	Layers evaluated

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0/655312	Land use
0/289791	Arterial streets Level 2
0/054297	Arterial streets of 1

Source: author's calculations

In the above table, the weight of each layer is shown by choice and confidence is equal 0/0408636 has been accepted and the weight has been determined that the selected layers Land Use-weight layer 0/655312 highest priority and weight is capable, the next layer's weight Allocated and the sum total of the selected layer should be number 1.

If the weight of the resulting sum, the result is the number 1/0000002 Number 0/0000002 software error is minimal and In fact, this software has a very high accuracy in weight. After performing the steps above and To obtain the exact weight of the selective layer The location of schools in Zabul, weight obtained Enter the GIS Overlapping layers can be done in practice to optimized and standards for construction of the school is known.

The resulting overlapping layers are map number (17-5), respectively. The map is the most suitable locations for the construction of schools, listed by priority criteria have been identified. There are schools where no construction permit has been marked in red. Where no construction permit has been shown in green schools that are located in areas of residential land is barren.

CONCLUSION

The resulting overlapping layers are map number (17-5), respectively. The map is the most suitable locations for the construction of schools, listed by priority criteria have been identified. There are schools where no construction permit has been marked in red. Where no construction permit has been shown in green schools that are located in areas of residential land is barren.

Looking at the location of the school compatibility with adjacent land is clear that a significant proportion of educational buildings, regardless of location, standards have been established. 33.3% of schools in the area are less than 60 meters from arterial streets and In addition to the problems of students passing the width of the streets, the schools in the vicinity The passageways of bothersome noise pollution caused by vehicle traffic and Clearly, it would be effective in reducing the efficiency of students. Most schools also located in the vicinity of incompatible applications for business users is that 15% of schools are located at a distance of less than 50 meters from the departments.

Evaluation criteria of utility indicates that the natural potential risks, particularly earthquakes, Education is a serious threat to buildings as part of the old buildings of sufficient strength to cause much not utility. In fact, it should be destroyed and modernization.

Another important parameter is the radius of the survey show that access Covering the range of services desired pattern does not follow because in some areas north and south of the West, especially in areas without coverage and performance. The main reason for this is the lack of proper schools because despite the lack of a shortage of schools in the region and There are 66 public and private primary schools in different districts of the city, many of these schools due to improper installation, in some neighborhoods, students traveled a long distance to reach their schools and Increased travel time.

In connection with the annual benchmark study shows that the existing capacity, 74 per cent of schools have less than standard, and it is important for public schools despite the diversity of students in high schools in the area, the per capita benefit is reduced. But on the other criteria, the capacity density of students in the class, the situation is satisfactory because 88 percent of schools average 30 students per class comply with the standards and the average number of students per class is 23. In connection with the use of schools must also be said that all schools are used as a split and this field reflects the desired position.

Testing Hypotheses

The First Hypothesis

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It seems that the spatial distribution of Zabol primary school education has been done on the basis of user location.

Check compliance with the criteria determined in accordance with Educational buildings against earthquake resistance, 8 of the 12% of Educational buildings against earthquake damage and no resistance whatsoever. Also, 53 percent of all school buildings and in fact, a significant proportion of schools with and without steel frame and masonry materials are highly vulnerable to earthquakes. The survey also measures the capacity of schools in relation to per capita, per capita below 74% of schools From 9 square meters and the distance is measured.

The results of studies on the compatibility of schools show that Overall, 22.6% of schools in poor and Incompatible applications are totally inappropriate. As Table (1-6) shows, 15 educational units in poor and totally inappropriate and of these, 6 were related to government schools Accounted for the greatest number. Thus, according to statistics, Maps were generated and the results of the evaluation criteria, the first hypothesis is proved.

Table 1-6: The elementary schools to the compatibility matrix composite layer

| Total | Compatibility status | | | | |
	Totally inappropriate	Inappropriate	Appropriate	Perfectly suited	Schools
21	3	1	3	14	Government boys
22	5	1	2	14	Government Girls
13	2	1	2	8	Boys NGOs
10	1	1	2	6	Girls NGOs
66	11	4	9	42	
					Total
100	16/6	6	13/7	63/7	Percent

Source: author's calculations

Second Hypothesis

It seems that the distribution of the elementary schools in Zabol not suit the needs of communities. Establishment of educational facilities within the city of Zabol is not desirable the school district has been formed in accordance with the needs of the community. Looking at the map of the location of schools, access and coverage radius Andrei distribution relationship with the community, the obvious fact that Stations 1, 5, 11, 16, 18, 21, 27, 30, 31 and 36, despite having no school and Students have to go to school sites are adjacent neighborhoods While in other school districts in excess of the capacity of communities there. There is no school in the area 5 and Students residing in the neighborhood of 27, 30 and 31 are forced to travel a distance of more than 1 km Access to educational spaces. In fact, within the city of Zabol, there are enough schools But the lack of distribution and optimal deployment of this application, has led RADIUS is not suitable access leading to an increase in the travel and observe Distances to get to these places. Thus, by virtue of the foregoing, the second hypothesis is proved.

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