

بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ

قال تعالى:

وَيَسْأَلُونَكَ عَنِ الرُّوحِ قُلِ الرُّوحُ مِنْ أَمْرِ رَبِّي وَمَا أُوتِيتُمْ مِنَ
الْعِلْمِ إِلَّا قَلِيلًا

سورة الإسراء آية 85

صدق الله العظيم

Dedication

To My:

Parents

...

Brothers and Sisters

...

Teachers

...

Friends

Acknowledgments

First, I give thanks to God for protection and ability to do work .

And I cannot find the words to express my special gratitude to all

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Abstract

Upgrading educational level of community is vital, namely in the terms of spatial distribution of schools and educational services. Therefore, it was necessary to go deeply in studying and searching the current spatial distribution of educational services (physical distribution of schools) scientifically using generally accepted tools .The study was conducted in North Kordofan state, Umm Rawaba City's primary schools. To study and analyze the challenges (problem) of inappropriate distribution of schools which resulted in surplus of schools in some residential areas while others suffer shortage of schools, and avoiding the use of scientific approaches and tools such as (GIS) at the time of making decision of current distribution of schools. The objectives of this study is to prepare a digital map included the schools under study, to recommend new appropriate sites for future proposed schools and modification of some current schools sites or locations that serve the needs of State Ministry of Education , Planning Department by using GIS and scientific methods, this to encourage decision makers to take needs-oriented decision. The searcher adapted descriptive analytical and, spatial analysis approaches, secondary data available at State Ministry of Education and other relevant governmental agencies and finally field study along with the use of GPS. To identify the locations of the schools, to take the correct coordinates. GIS tools were used to facilitate the analytical process and processing. The study findings was preparation of digital maps for Umm Rawaba City's Schools, suggesting sound solutions for the challenges of schools distributions using GIS.

المستخلص

ان الإرتقاء بالمستوى التعليمي للمجتمع أصبح من الضروريات خاصة في موضوع التوزيع المكاني للمدارس، والخدمات التعليمية. لذلك كان من الضروري الوقوف على التوزيع المكاني لهذه الخدمات ودراسة توزيعها بصورة علمية دقيقة. وقد أجريت الدراسة للمدارس الابتدائية بولاية شمال كردفان، مدينة ام روابه. لمعالجة وتحليل المشكلة المتمثلة في عدم توزيع المدارس بشكل مثالي، مما أدى الى تركزها في منطقه معينة، ونقص في المناطق الأخرى. عدم استخدام المناهج العلمية والأدوات مثل (GIS) في ذلك الوقت لاتخاذ القرارات عند توزيع هذه المدارس. وتمثلت أهداف الدراسة في إعداد خريطة رقمية للمدارس تضمنت المدارس قيد الدراسة، اقتراح مواقع جديده مناسبة للمدارس مستقبلا، وتعديل بعض مواقع المدارس وفقا لملائمتها لمعايير التخطيط وزارة التربية، باستخدام نظم (GIS) والطرق العلمية لمساعدة متخذي القرار لاتخاذ القرارات الصحيحة مستقبلا. وقد اعتمد الباحث على المنهج الوصفي التحليلي، ومنهج التحليل المكاني، والبيانات المتوفرة لدى وزارة التربية والتعليم والدوائر الحكومية والدراسات الميدانية التي استخدم فيها نظام تحديد المواقع الجغرافي (GPS) لتحديد اماكن وجود هذه المدارس واخذ الاحداثيات الصحيحة لها، بالإضافة لأدوات التحليل الموجودة ببرمجيات نظم المعلومات الجغرافية لتسهيل عملية التحليل والمعالجة. كانت نتائج الدراسة، إعداد نموذج خرائط رقمية لمدارس مدينة ام روابه، إقتراح الحلول السليمة لمواجهة صعوبات توزيع المدارس باستخدام (GIS).

TABLE OF CONTENTS

Verse.....	ii
Dedication.....	iii
Acknowledgement.....	iv
Abstract.....	v
المستخلص.....	vi
Table of Contents.....	vii
List of Table.....	x
List of Figure.....	xi
List of abbreviations.....	xii
CHAPTER ONE: INTRODUCTION.....	2
1.1 Introduction.....	2
1.2 Research Problem.....	3
1.3 Research Question.....	3
1.4 Research Objective.....	3
1.5 Area of Study.....	4
1.6 Research Methodology.....	4
1.7 Expected Results.....	4
Chapter Summary.....	5
CHAPTER TWO: BACKGROUND AND LITERATURE REVIEW.....	7
2.1 Historical Glance About Umm Rawaba City.....	7
2.1.1 Umm Rawaba City Location.....	7
2.1.2 The history of Rawaba.....	7
2.1.3 Topography.....	7
2.1.4 Climate.....	8
2.2 Operational Definition of Terms.....	8
2.3 Literature Review.....	8
2.3.1 Definition of Basic Education.....	8
2.3.3 Principle and General Objectives of Education.....	9
2.3.2.1 Structure and Organization of the Education System.....	10

2.3.3 Universal Primary Education.....	11
2.3.4 Primary Education (Basic Education).....	11
2.4 Laws and Other Basic Regulations Concerning Education.....	11
2.4.1 Rules of Basic Education in Sudan.....	12
2.5 International Standards for Education Services Distribution.....	13
2.5.1 Capacity.....	13
2.5.2 Accessibility	13
2.5.3 Environmental Considerations.....	14
2.6 Related Study.....	14
2.7 Discussion of Related Study.....	18
Chapter Summary.....	20
CHAPTER THREE: METHODOLOGY AND TOOLS.....	22
3.1 Study Approach and Tools.....	22
3.1.1 Field of Study.....	23
3.2.2 Design Geographic Database.....	24
3.2.3 The GPS Satellite System.....	26
3.2.4 How GPS Works.....	27
3.2.5 Data Collection from Land Registry Office of Umm Rawaba cit.....	27
3.2.6 Plotting of Coordinates in the Map.....	28
3.2.7 Create Maps.....	28
3.2.8 Processing and Analysis.....	31
3.2.9 Geographic Information Systems.....	32
3.2 Geographical Distribution of Primary Schools in Umm Rawaba.....	33
3.3 Discussion.....	39
3.4 State Ministry of Education Basic Schools Distribution Criteria.....	40
3.4.1 Distribution by Criteria Capacity.....	40
3.4.2 Distribution by Standard Accessibility.....	41
3.4.3 Directional Distribution Analysis.....	48
3.4.4 Discussion Directional Distribution Analysis.....	51
3.4.5 Analyzing Nearest Neighborhood.....	52

3.5 The best-suited Recommended Distribution Model for Primary Schools Model.....	54
Chapter Summary.....	58
CHAPTER FOUR: RESULTS AND DISCUSSION.....	60
4.1 Results and Discussion.....	60
Chapter Summary.....	61
CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS.....	63
5.1 Conclusion.....	63
5.2 Recommendations.....	63
Chapter Summary.....	65
References.....	66

LIST OF TABLES

Table 2-1: Show These Studies and The analysis Tools That used By Each Study....	18
Table 3-1: Show the boys Schools, Location and Tts Coordinates.....	29
Table 3-3: Show The girls' Schools, location and Its Coordinates.....	30
Table 3-4: Show The co-schools, Location and Its Coordinates.....	30
Table 3-6: The total number of students, Schools, Capacity for City of Umm Rawaba.....	34
Table 3-7: Boys School for The city of Umm Rawaba.....	35
Table 3-8: Girls school in the city of umm ًawaba.....	36
Table 3-9: Co-schools in The city of Umm Rawaba. The values of Neighboring Coefficient.....	37
Table 3-10: The values of Neighboring Coefficient.....	52

LIST OF FIGURE

Figure 2-1: Structure and Organization of the Education System.....	10
Figure 3-1: Method of the Application Steps Methodology.....	22
Figure 3-2: Locations of Schools for Umm Rawaba city.....	24
Figure 3-3: Steps of Design Geographic Information Database for Schools of Umm Rawaba City.....	26
Figure 3-4: Illustrate Location the Schools of Umm Rawaba.....	31
Figure 3-5: S P of Population Density in each School and each District.....	38
Figure 3-6: Shows Use Tool (B Z A) for Schools Boys, Distance 500m.....	42
Figure 3-7: Shows Use Tool (B Z A) for Schools Girls, Distance 500m.....	43
Figure 3-8: Shows Use Tool (B Z A) for co-schools, distance 500m.....	44
Figure 3-9: Shows Use (B Z A), Schools Boys, Distances (300, 400, and 500)	45
Figure 3-10: Shows Use (B Z A), Schools Girls, Distances (300, 400, 500) m.....	46
Figure 3-11: Illustrates Use Tool (B Z A) for Co-Schools.....	47
Figure 3-12: (D D A) Reveal Concentration of Boys' Schools, Distance (500) m...49	
Figure 3-13: (D D A) Show Concentration of Girls' Schools, Distance (500) m....50	
Figure 3-14: (D D A) Show Concentration of Co-Schools, Distance (500) m.....51	
Figure 3-15: Nearest Neighbor Analysis of Primary Schools in Umm Rawaba.....53	
Figure 3-16: Above Pattern Analysis Reveal Random Distribution of Umm Rawaba Schools Based on Average Nearest Neighbor Distance.....53	
Figure 3-17: Illustrate Random Distribution of Umm Rawaba Schools.....54	
Figure 3-18: The best-suited Recommended Distribution Model for Primary Schools Model.....56	

TABLE OF ABBREVIATION

Abbreviation	Meaning
GIS	Geographic Information System
PCR	Pupil-Classroom ratio (Capacity)
UNESCO	United Nations Education Scientific and Cultural Organization
UPE	Universal Primary Education
SPSS	Statistical package for Social Sciences
GPS	Global Positioning System
ESRI	Environmental Systems Research Institute
B Z A	buffer zone analysis
S P	Spatial distribution
D D A	Directional Distribution Analysis
N N A	Nearest Neighbor Analysis
D G I D	Design geographic information database

