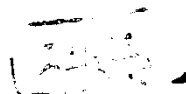


Ain Shams University
Faculty of Engineering



Distribution Patterns of Educational Facilities in Cairo :
The Case of Technical Industrial Schools

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Thesis submitted
by

Hany Moustafa El Gendy

in fulfillment of a Master's Degree
in
Urban Planning

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Supervisors

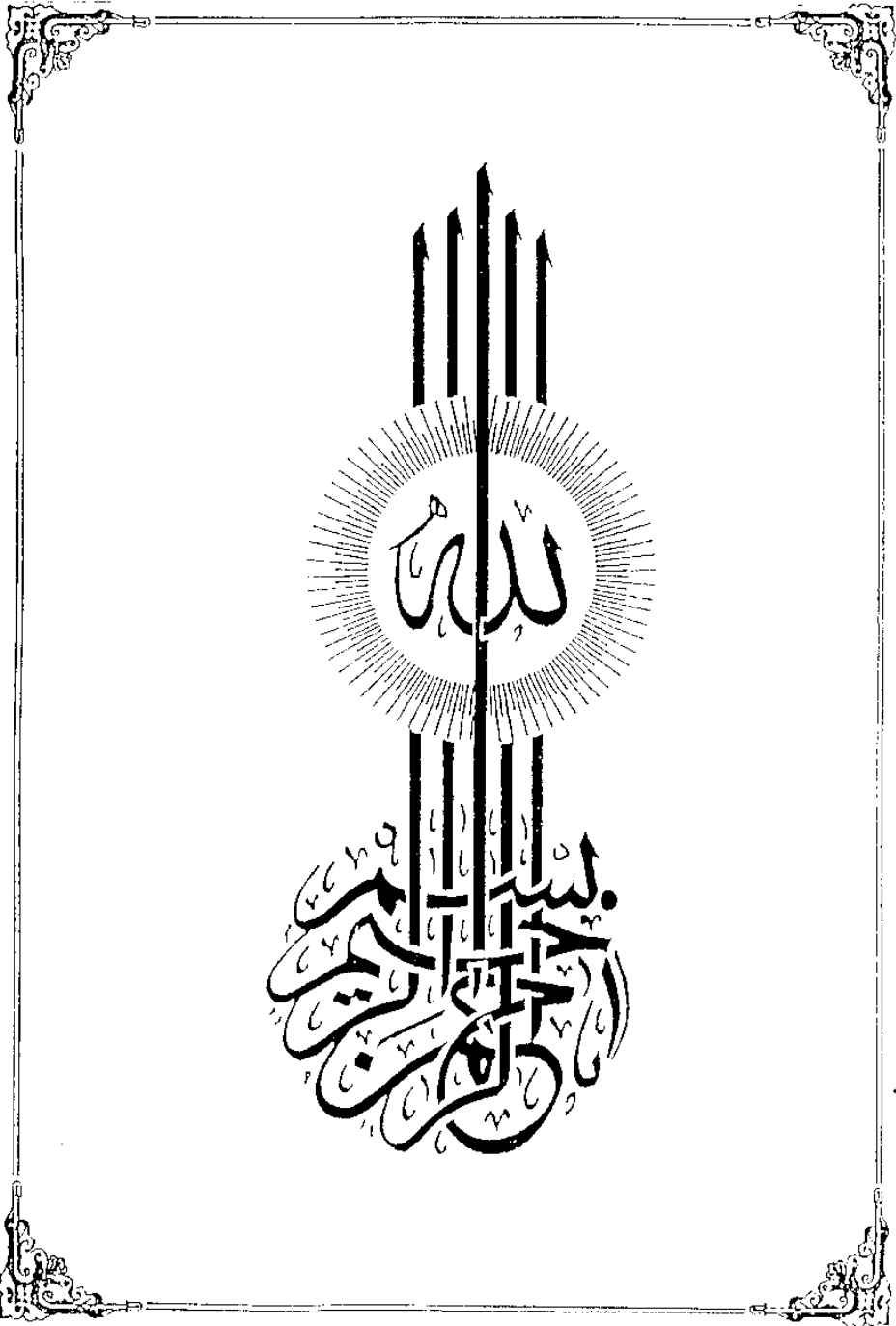
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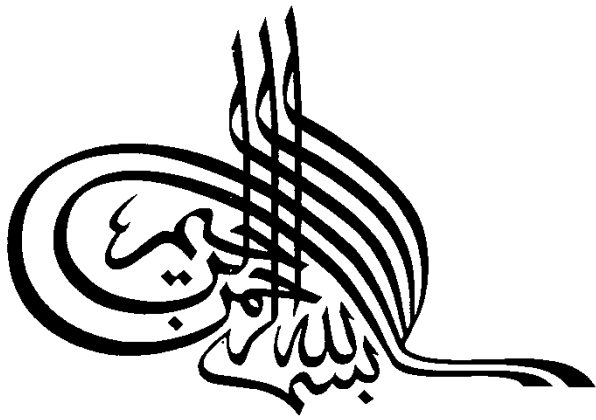
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Approval Sheet

Distribution Patterns of Educational Facilities in Cairo, the case of technical industrial schools

by

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B.Sc. of Architecture - Urban Planning
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Statement

This dissertation is submitted to Ain Shams University for the degree of Master of Science in Architectural Engineering - Urban Planning.

The Work in this thesis was carried out by the author in the Department of Urban Planning, Ain Shams University, From 1993 to 1996.

No part of this thesis has been submitted for a degree or a qualification of any other university.

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Abstract

The importance of studying services in Cairo has emerged from the growing pressure on public services. This pressure is a result of the imbalanced growth between the population and the public services. Although a high concentration of public, private and commercial services occurs in Cairo more than any other city or region in Egypt, public demand of different types of services has grown more rapidly than the service growth rate. Another dimension of the problem of public services in Cairo is the inequity of the distribution of these services over administrative subdivisions. Besides, high concentration of different kinds of services in some districts and its scarcity in others which has affected the spatial efficiency of the service, as demand and supply do not match spatially, creates long travel trips to attend different kinds of public services. This study aims at setting a distribution plan for future requirements of technical industrial schools in Cairo, as a part of educational, and community services. The study of industrial education facilities in Cairo, as a part of educational facilities and public service facilities, will be composed of the following components: theoretical aspects of the service, the description of the main features of the existing network of technical industrial education facilities in Cairo, the diagnosis of the existing facilities network, and Setting up a proposal.

Theoretical aspects of the service aim at drawing a clear vision of technical industrial education. Chapter Two is devoted to studying the theoretical aspects of industrial education, by introducing the definition, nature, purpose, scope, and aim. Then, a study of industrial education in Egypt is offered, including its emergence, development, growth, and location in the educational structure.

The description of the main features of the existing network of technical industrial education facilities in Cairo includes the number, size, type, location, and catchment area boundary of the service facilities. Chapter Three is devoted to describing the existing network of industrial education facilities in Cairo. It is a supply analysis of industrial education services on the district and the city level.

The diagnosis of the existing facilities network is an essential stage of planning educational facilities procedure in order to mark any inequity in the provision of schooling. Conclusions drawn from this stage will be used as justifications for the proposal to be made when drawing-up the plan. When diagnosing the distribution of industrial education facilities in Cairo, three major dimensions are adopted: demographic, economic, and spatial.

Chapter four is devoted to diagnosing distribution of industrial education facilities according to demographic and social characteristics of population. Chapter five is devoted to diagnosing the distribution of service facilities according to economic activities which occur in the district and the size of employment in each economic activity. Chapter six is devoted to a spatial analysis of the actual demand distribution using student home addresses, as compared with the school location they attend. This analysis is applied on a sample of schools, and the location of each school is evaluated using two indicators: index of school localization, and the average travel distance of the student attending the school. Using the same sample, major demand areas are defined.

Chapter Seven is an attempt to draw-up a proposal for industrial education facilities in Cairo. This proposal is concerned with determining and locating future facilities needed to face the targets of the educational national plan and the goals of the Ministry of Education. Drawing-up this proposal has followed the following steps:

1. Standardization of industrial schools which is an attempt to define different parameters related to the physical planning of the service facilities, such as minimum, optimum, and maximum school and class size.
2. Calculation of the actual capacity of industrial education facilities in Cairo, using the determined standards of industrial schools.
3. Discussion of different approaches of community service facilities needs assessment. Then, future needs of industrial education in Cairo have been projected for each type of industrial education. Using demographic data prepared by C.A.P.M.A.S., and enrollment ratios planned by the Ministry of Education.
4. Total needs of industrial education in Cairo have been distributed over administrative subdivisions regarding different demographic, economic, and spatial aspects, which form the demand probability index for industrial education.
5. Size, location, and type of required facilities to face demand has been decided, after a discussion of different approaches of service facilities locational analysis to rationalize the location of proposed schools.

At the end of the research, a proposal of industrial education facilities of different types is drawn for the target years.