A plan to deal with the supplementary gaps in the "pre-university education stage" to maximize its role in community participation in Egypt.

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Abstract:

In light of the global trends in the development process and the involvement of the surrounding community in it, education comes as a basic direction and pillar for achieving development in societies, and one of the most important means of achieving this is the necessity of integration between school spaces and the surrounding community and not having a limited vision of the school building as a place that opens its doors in the morning and closes them in the evening and on holidays, without using school services and equipment.

Taking into account the sustainable role that Egypt seeks to achieve in keeping pace with global trends and Egypt's Vision 2030 with regard to the field of education and how the school building affects the surrounding community, this can be achieved by exploiting the complementary spaces in schools to maximize their societal role.

Therefore, the research sheds light on clarifying the concept of the school building and its effective role in the surrounding community by clarifying a case study model that was developed in accordance with the latest global trends, in addition to clarifying one of the models in Egypt and extracting a framework for its application to government school models in Egypt, in addition to clarifying the most important results and recommendations, which must be taken into account when implementing the action plan.

Keywords:

الملخص:

إن التنمية بشكل عام وقطاع التعليم بشكل خاص، باعتباره أحد ركائز التنمية الاقتصادية، هدف رئيسي تسعى إليه جميع الدول لتحسين أوضاعها. إلا أن هناك العديد من المعوقات الرئيسية التي تعترض خطط التنمية في كافة أنحاء العالم، وأهمها زيادة أعداد السكان. ومن المتوقع أن يتضاعف عدد سكان مصر تقريبا بحلول عام ٢٠٥٠. مما يشكل تحديات هائلة في مجال التعليم

وبالتالي أصبحت مشكلة تزايد أعداد السكان، والتي انعكست بدورها على قطاع التعليم، من أهم المعوقات والقضايا الملحة التي تواجه برامج التنمية في العالم بشكل عام ومصر بشكل خاص. وقد لجأت الحكومة المصرية إلى وضع مجموعة من السياسات والبرامج للتعامل مع هذه المشكلة.

وفي هذا السياق، نفذت الدولة المصرية العديد من مشروعات إنشاء المدارس في جميع المحافظات والمدن الجديدة على مستوى الجمهورية، كما تم تخصيص مبالغ محددة للإنفاق الحكومي في ذلك القطاع. لكن بالنظر إلى معدلات الإنفاق الحكومي على قطاع التعليم نجد تغيرا واضحا قبل وبعد إطلاق رؤية مصر ٢٠٣٠. وهذا هو السؤال الذي يطرح نفسه حول سبب التغير في معدلات الإنفاق وهل قامت هذه المدارس بأداء المطلوب؟ الدور المطلوب منهم وفقا للاتجاهات العالمية وخطط التنمية، وأهمها تطوير المدارس إلى مراكز مجتمعية من خلال مرافقها المشتركة، مع التركيز على دعم البيئة المادية (البنية التحتية الاجتماعية) لمثل هذه الأنشطة.

كما نبين أن بيانات وزارة المالية أظهرت زيادة في مخصصات الإنفاق الحكومي لقطاع التعليم على مدار ٥ سنوات مالية، وفقا لبيانات البيان المالي لمشروع موازنة ٢٠٢٢-٢٠٢٣ بعد رؤية مصر ٢٠٣٠، والذي انطلق في فبراير ٢٠١٦، والذي يعكس خطة الدولة الإستراتيجية طويلة المدى لتحقيق مبادئ وأهداف التنمية المستدامة في كافة المجالات، وتوطينها في أجهزة الدولة المصرية المختلفة

لذا تتجه الدراسة البحثية إلى تبني خطة لتعزيز الدور المجتمعي للمدارس وتكامل مساحاتها لخدمة المجتمع المحيط "الاستخدام المجتمعي". بل تمتد الخطة لتشمل خدمة المجتمع المحيط، واعتبارها محورًا مباشرًا. من أجل عملية التطوير وتوفير إطار متكامل لهذه المدارس وتعزيز دورها المجتمعي بما يتوافق مع التوجهات العالمية لخطط التنمية ورؤية مصر ٢٠٣٠.

الكلمات المفتاحية:

المدرسة، المساحات الإضافية، المرافق المشتركة، الاستخدام المجتمعي، رؤية مصر ٢٠٣٠

Introduction:

Development in general and the education sector in particular, as one of the pillars of economic development, is a major goal that all countries seek to improve their conditions. However, there are many major obstacles to development plans in all parts of the world, the most important of which is the increase in population numbers. It is expected that the number of city residents will almost double by the year 2050. This poses enormous challenges in the field of education (1).

Cities in general, and Egypt in particular, are witnessing increasing rates of population growth. The statistics of Egypt's population data until 2016, which are the latest statistics since they are issued only every 10 years, showed an increase in the population from 59.2 million people in 1996 to 72.6 million people in 2006, then 94.8 million people in 2016, and that the annual growth rate of the Egyptian population increased from 2.04% during the period from 1996 to 2006 to 2.56% during the period from 2006 to 2016. The relative distribution of the population according to the governorates also showed that the largest percentage of the Egyptian population is in Cairo Governorate, at 10.1%.

Followed by Giza Governorate with 9.1%, Sharqia with 7.6%, and Dakahlia with 6.8%. (2).

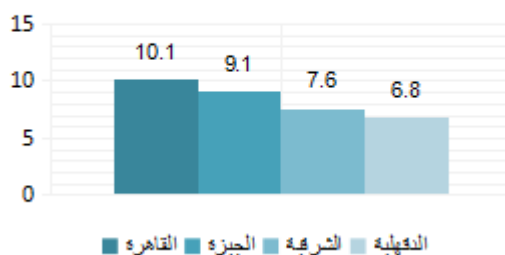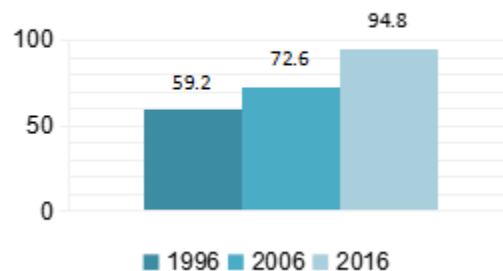Fig1: Percentage distribution of population according to governorates.
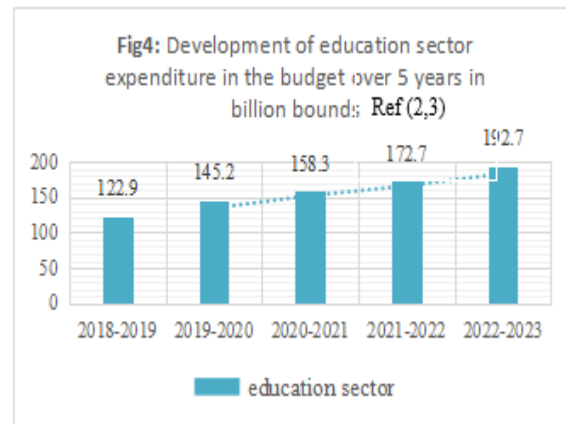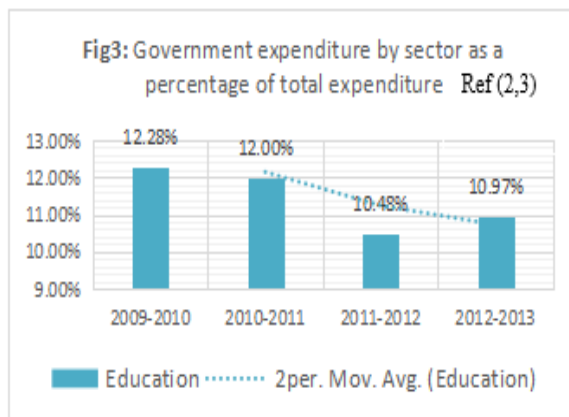
Fig 2: Growth rate of the Egyptian population in million people.

Consequently, the problem of increasing population numbers, which in turn has been reflected in the education sector, has become one of the most important obstacles and pressing issues facing development programs in the world in general and Egypt in particular. The Egyptian government has resorted to developing a set of policies and programs to deal with this problem. (3)

In this context, the Egyptian state has implemented many school construction projects in all governorates and new cities across the Republic, and specific amounts have been allocated for government spending in that sector. However, looking at the rates of government spending on the education sector, we find a clear change before and after the launch of Egypt's Vision 2030.

Fig3: Government expenditure by sector as a percentage of total expenditure   Ref (2,3)

Fig4: Development of education sector expenditure in the budget over 5 years in billion bounds Ref (2,3)

This is the question that arises about the reason for the change in spending rates and whether these schools performed the role required of them according to global trends and development plans, the most important of which is developing schools into community centers through their shared facilities, with a focus on supporting the physical environment (social infrastructure) for such activities, which is developing schools into community centers through their shared facilities, with a focus on supporting the physical environment (social infrastructure) for such activities.

As we show, Ministry of Finance data showed an increase in government spending allocations for the education sector over 5 fiscal years, according to the data of the financial statement of the 2022-2023 draft budget after Egypt Vision 2030, which was launched in February 2016 and reflects the state's long-term strategic plan to achieve the principles and goals of sustainable development in all fields and localize them in the various Egyptian state agencies (4).

Therefore, the research study is directed at adopting a plan to enhance the societal role of schools and integrate their spaces to serve the surrounding community through "community use." The government should not deal with school construction projects by reducing them to numbers and construction requirements without paying attention to that role. Rather, the plan extends to include serving the surrounding community, considering them a direct focus. For the development process, providing an integrated framework for these schools and enhancing their societal role in accordance with the global trends of development plans and Egypt's Vision 2030.

Problem:

The absence of an integrated vision to deal with the societal integration of supplementary spaces in pre-university education schools in Egypt, which may result in the inability of these schools to achieve the developmental role required of them according to Egypt's Vision 2030 and global trends, highlights the importance of establishing a framework that can be activated to achieve this role.

The main research problem was identified through a set of sub-problems, such as:

• The problems that were addressed and the need to work on them were identified in accordance with Egypt's Vision 2030 in the field of education to keep pace with global trends. As follows:

• A decrease in the rate of government spending in the education sector in Egypt before the launch of Egypt's Vision 2030 in 2016.

• Despite the state's intention to establish many pre-university schools in new cities, it did not provide appropriate community educational services in accordance with global trends.

• Lack of clarity on the concept of community participation in supplementary spaces and the steps that must be followed to implement these participations.

• Extreme weakness in practicing school activities in public schools in general, and consequently the spaces allocated for them.

• Weakness of some legislative aspects and some laws regulating the process of community integration of supplementary spaces in pre-university education schools in public schools.

Goal:

The main objective of the research is to draw up a plan to integrate supplementary spaces in public pre-university education schools in Egypt with the surrounding community within a sequential and coherent framework that is subject to flexibility for modification to be applied appropriately to this type of school.

Importance:

•Finding an effective way to help the state provide basic facilities according to the needs of society through supplementary spaces in school buildings.

•Helps clarify the role of complementary spaces at the community level.

•Maximizing the use of existing facilities and assets in the country through school buildings, and emphasizing their interactive and complementary role with the surrounding community.

Search limits:

Spatial boundaries: First District, Sheikh Zayed City, Egypt; YSH School in Australia.

Objective limits:

Studying the models of a group of pre-university education schools in Egypt and the possibility of exploiting their complementary spaces to carry out their role in societal use. And a study of a model of a modern school that follows global trends, its complementary spaces were exploited to play a role in societal use.

Research Methodology:

The research followed several research methods to reach its desired goal, through which this research study was carried out, which are as follows:
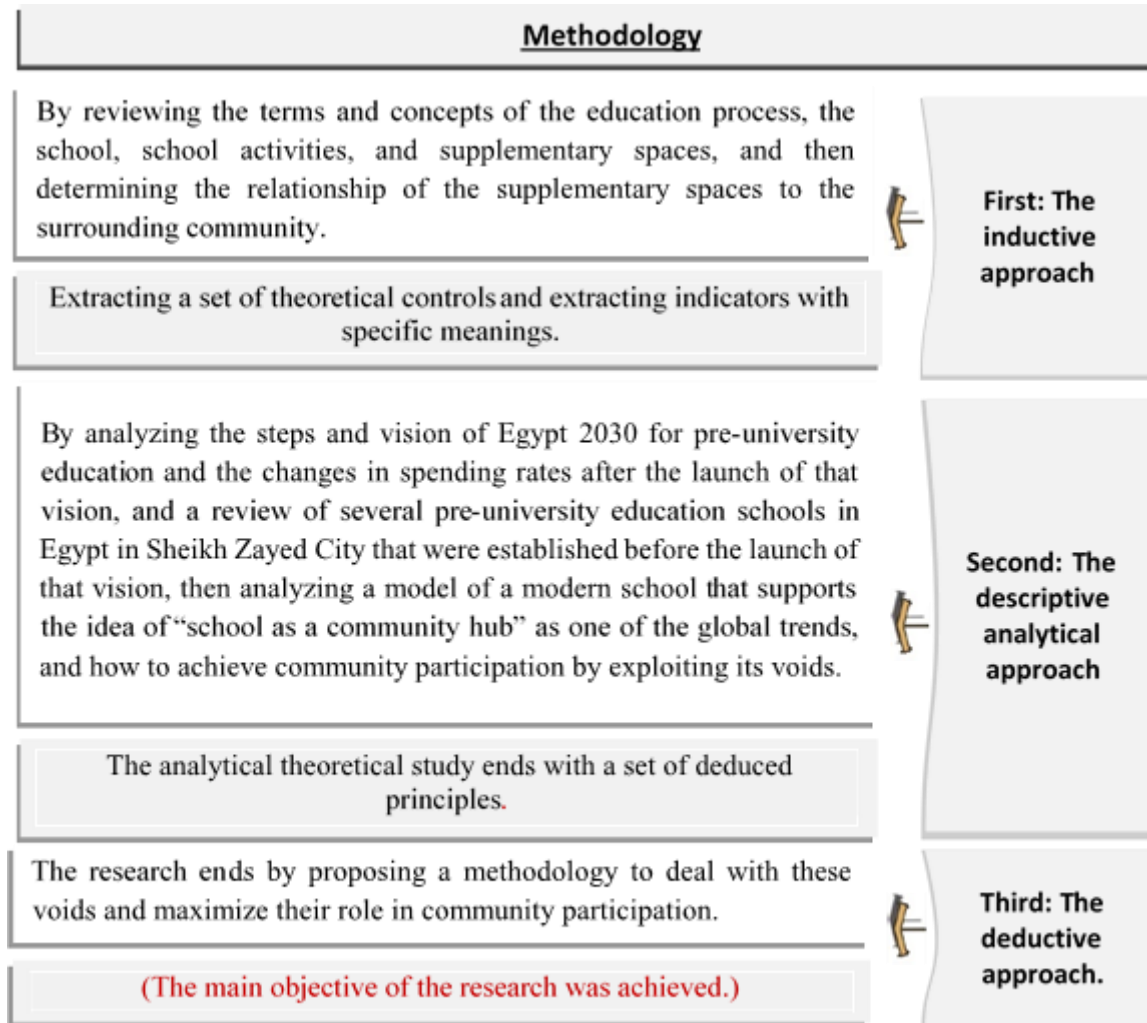

Fig.5: Methodology of the Research. Ref: The researchers

Procedural steps for research:

- First: The educational system in Egypt
- Second: School's type in Egypt
- Third: The basic functions of the school
- Fifth: Definition of school activity (supplementary)
- Sixth: Objectives of the (supplementary) school activity
- Seventh: The functional relationships of the complimentary spaces
- Eight: Defining joint use of school facilities
- Ninth: Conclusion: General components of the proposed curriculum and recommendations

First: The educational system in Egypt:

The Egyptian education system follows a 6+3+3 structure, with 6 years of primary school, 3 years of preparatory school, and 3 years of senior secondary school. The Ministry of Education administers school education in Egypt.

Education in Egypt is compulsory from the age of 6 to 14. Compulsory education in Egypt lasts for nine academic years, from Grade 1 to Grade 9. Schools in Egypt are of two types: Government schools and private schools. The following is a review of the general framework of the education system in Egypt to get acquainted with its general framework and directions, as it includes the stages of pre-university education and university education, and the responsibility of the first devolves to the Ministry of Education, while the second is to the Ministry of Higher Education (5), (6).

The education system in Egypt and plans for its development

The educational system in Egypt (K-12 educational system)	
Pre-university education	
Kindergarten stage Kindergartens consist of activities that nurture ethical values and social cooperation in children. It works towards the physical, emotional and social development of the children.	
Ages: 4-6	Duration: 2 years
The basic education stage is compulsory. The Ministry of Education determines the curriculum of the primary schools in Egypt. The first two years of primary education focus on reading and writing, while the later years of primary school focus on science and mathematics. **Curriculum:** Mathematics, science, English, religious studies, Arabic, and music. In Grade 4, agriculture is also taught and in Grade 5, social studies, art, and home economics are introduced. At Al-Azhar schools, the curriculum is usually the same with a main focus on Islamic studies. There are many international schools in Egypt that follow American, Canadian or British curriculum.	

Elementary		**The preparatory, Lower secondary education**	
Ages: 6-12	Duration: 6	Ages: 12-15	Duration: 3 years
At this stage, the child's energies and abilities are developed, and the child acquires basic skills that they employ in the activities of daily life; linking the theoretical side with the practical side. **Curriculum:** Mathematics, science, English, religious studies, Arabic, and music. In Grade 4, agriculture is also taught, and in Grade 5, social studies, art, and home economics are introduced. At Al-Azhar schools, the curriculum is usually the same, with a main focus on Islamic studies. There are many international schools in Egypt that follow American, Canadian, or British curricula.		This level of education forms the final level of compulsory education in Egypt. It is also known as the preparatory stage. This stage includes two preparatory departments: General and preparatory, and vocational. The duration of study for each of them is three years. The study in preparatory schools is focused on providing students with an appropriate amount of information. Whereas in vocational preparatory schools, vocational training is taken care of in order to contribute to productive work. **Curriculum:** Agriculture, English, Arabic, arts, music, social studies, mathematics, religious studies, and industrial education. Some of the schools also provide European languages, usually Spanish or French.	
Students who complete the basic compulsory education stage are awarded a "Basic Education Certificate". Pupils with a Basic Education Certificate or Al-Azhar Basic			

Education Certificate are eligible for admittance into general upper secondary school, technical and vocational secondary school, or Al-Azhar secondary school.

Secondary education stage is not compulsory. Secondary education comprises three tracks: General secondary education schools, vocational or technical secondary education schools, and Al-Azhar secondary education schools.
Ages: 15-18   Duration: 3 years

General Secondary Education Schools	**Technical and vocational secondary education**	**Al-Azhar System**
These schools provide academic programs, thus preparing students for higher education Duration: 3 years Curriculum: At this level, there are two streams from which students can select: Literacy or science. Both streams include Arabic and English as mandatory subjects, along with the following streamed subjects: Science: Physics, mathematics, biology, and chemistry Literary: History, home economics, arts, and geography Elective subjects: Social studies, music, environmental sciences, European languages, philosophy, national studies, and psychology. The elective subjects are selected based on the pupil's intended higher education-level specialization. Al-Azhar curriculum includes similar subject areas, but with a main emphasis on Islamic studies.	Vocational and technical preparation prepares for work life and lasts for 3-5 years. To gain admittance into technical and vocational secondary education, students must hold a Basic Education Certificate. The curriculum includes general secondary education subjects, along with Arabic and English. The major time spent is studying the specialization area. Technical education offers programs that last for 3-5 years and includes schools in 3 different areas: Agricultural, industrial, and commercial. The vocational track focuses more on trade-oriented education and skills. At technical secondary schools, pupils can take up one of two qualifications: Technical Secondary Education Diploma: The Technical Secondary Education Diploma takes 3 years of study after the Basic Education Certificate, with pupils specializing in one of 3 streams: Streams: Technical, industrial, or agricultural.	Another system that runs in parallel with the public education system in Egypt is known as Al-Azhar system. Al-Azhar system comprises three stages: • Primary stage that is of 6 years • Preparatory stage of 3 years • Secondary stage of 3 years Al-Azhar education system is administered by the Supreme Council of Al-Azhar Institution. Al Azhar schools are named "institutes" and include primary, preparatory, and secondary stages. Religious as well as non-religious subjects are taught in all schools at all stages.

Private sector education

Private schools are available at all educational levels. The private sector is administered by the Ministry of Education, and this sector teaches state-approved curricula. Mainly, there are three types of private schools: **Ordinary schools:** These schools are similar to government schools in terms of the curriculum and focus more on the needs of the students.

Language schools: These schools teach the major portion of the curriculum in English and include German and French as a second foreign language. Such schools' fees are generally high.

Religious schools: These schools are religiously oriented, and their curriculum is different from the state or Al-Azhar school's curriculum.

University education

It is an optional stage that the student enrolls in after passing the stage of basic education (primary and preparatory) and the stage of secondary education of the various types mentioned above.

Table 1: The educational system in Egypt. Ref: (5), (6)

Second: School's types in Egypt

A school is an educational institution designed to provide learning spaces and learning environments for the teaching of students under the direction of teachers.

School's types in Egypt: (5), (6)

•*Government Schools*

In Egypt, there are two types of government schools:

Arabic language: At such schools, the language of instruction is Arabic and it is almost free of charge.

Experimental language school:

These schools use English and a second foreign Language-French or German-in preparatory education. These schools charge fees.

Fig.6: School's types in Egypt. Ref: (5), (6)

•*Private Schools*

There are four types of private schools:

Ordinary School: The ordinary schools are similar to the Arabic governmental schools, but these are managed and supervised by private authorities. Their curriculum is on the same lines as that of government schools in Egypt. These schools charge fees.

Language Schools: These schools teach most of the curriculum in English and also use a second foreign language- French or German.

Religious schools: These schools are religiously oriented, such as Azhar Islamic schools or Catholic schools.

International's schools: These schools provide curriculum from different countries, like the British, German, or French systems, and the degrees offered by them are certified by the Ministry of Education.
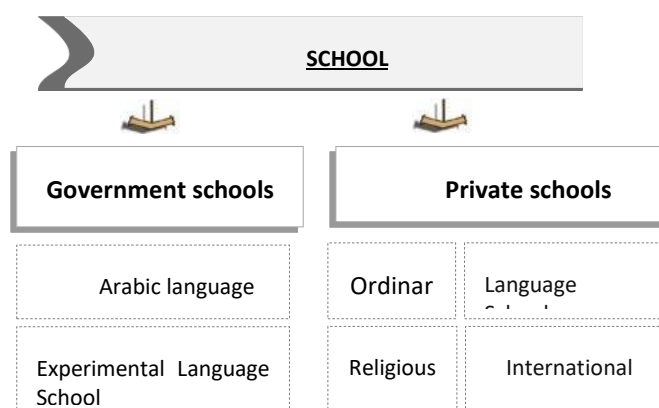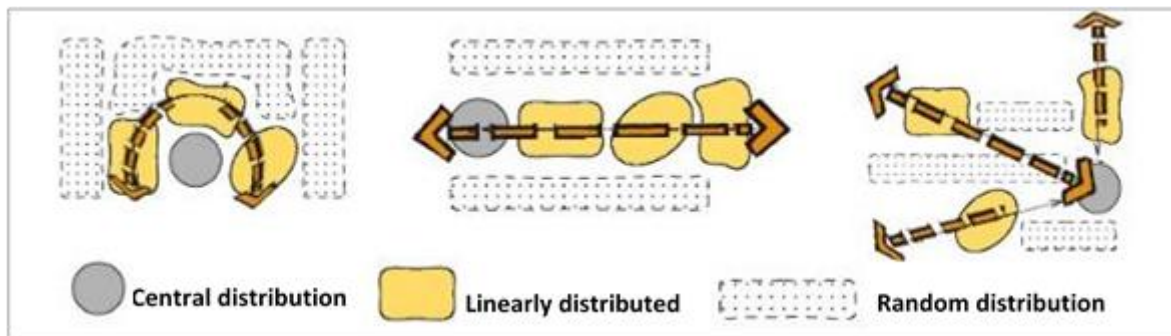
Fig7: The school's form in Egypt. Ref: (5), (6)

Third: The basic functions of the school:
The school is no longer just walls; its primary role lies in being the entity responsible for education and upbringing that helps in creating a message in every stage of its education.
Schools serve the purpose of transmitting knowledge to students to give them the information and skills they need to succeed in life. These functions are constantly evolving in order to match the current needs of society. Schools have both intended and unintended influences on what students learn.
The function of the school is summarized as: A formal function, an educational function, and an ideological function, and will be summarized as follows: (7)
First: A formative function: Reading and writing are taught in addition to religious, historical, and literary knowledge gradually, and this function aims to make the individual open to public life.
Second: An educational function: It is the job of raising children in a way that makes them respect other societies.
Third: An ideological function: The school is a tool for inclusion and a bridge through which the state passes through intellectual policies and methodologies.
It has a different role: An interactive role that brings them together as a center for their surroundings or the neighborhood in which they are located.

Requirements of the Educational Building Authority in Egypt:
There is no doubt that school buildings are different from other buildings because of their different purposes.
Therefore, the school buildings should take into particular account standards when designed, such as general planning, the school's location, technical needs, and excellent and adequate ventilation within the classroom. The school's design criteria include choosing the appropriate style for each stage of education, identifying the various areas of educational spaces, and distributing the total area according to the number of pupils studying. (8)

Site validity requirements, school size
The site area is calculated as a direct relationship between the size of the school and the total number of students, and no future horizontal or vertical extensions are allowed on the same flat site.
In the case of existing schools, any future horizontal or vertical extensions are permitted only within the limits permitted by the site and building viability requirements given in this brochure.

School size (the total capacity of the school) is linked to a set of governing and common conditions: (7), (8)

B-	A-
The minimum for a basic education school is ١٢٠٠ m^2	
The minimum for a secondary school is 1,250 m^2	
The minimum of the basic secondary stage is 2500 m^2	
C- The minimum student shares of the site area are specified as follows:	
The minimum in the primary school of education is ٤ m^2/student	
The minimum age for secondary education is ٦ m^2/student	
The minimum for secondary school basic education is ٥ m^2/student	
D- The minimum student shares from the area of churches, playgrounds and open spaces specified as follows:	
The student's share shall not be less than 2.5 m^2/student in basic education.	
The student's share shall not be less than 3 m^2/student in secondary education.	
The student's share shall not be less than 2.75 m^2/student in basic/secondary education.	
E- The maximum number of students in the specified semester is as follows:	
Effects of kindergarten (36 student /class) after excluding the decisions of the two ministries and Section 298.	
Basic education classes (40 student /class) (instructions made with Ministerial Resolution No. 148 of 2000).	
Secondary education classes (36 student /class) (instructions issued with the decision Ministerial No. 148 for the year 2000).	
F- The minimum number of students per semester is defined as follows:	
Class density at all levels: 25 students per class.	
An exception can be made with a minimum of 20 t/f, provided that each case is studied	
For departments of international schools in existing schools, the maximum class density is 25 student /class requests, and the building limit is 15 student /class).	
G- Class and the size of the school are related to the number of classes allowed on the	
On the basis, that the minimum class is one class and grows for one stage (primary, secondary or primary/secondary together).	

<p align="center">Table 2: The school's form in Egypt. Ref: (5), (6)</p>

Fourth: Definition of school activity (supplementary):

School activity is an important complementary focus for achieving the goals of the educational process in general through achieving cognitive, emotional, and skill goals and inclinations during the various educational stages.

Many terms refer to school activity, as follows: (9), (10)

School activity is defined according to the American Encyclopedia as: "Those programs that are implemented under the supervision and guidance of the school and that deal with everything related to school life and its various activities related to academic subjects, social and

environmental aspects, or clubs with special interests in practical, scientific, sports, musical or theatrical aspects. Or school publications:

It is defined as "a well-thought-out plan, a means to enrich the curriculum, and a program organized by the educational institution that integrates with the general program decided by the learner and practices it willingly and spontaneously, so that it achieves educational goals closely related to the school curriculum or outside it, inside or outside the classroom during the school day or outside work hours, which leads to the growth of the learner in all aspects of his educational, social, mental, emotional, and physical linguistic development, which results in a compatible personality capable of production.

This means any activity sponsored by the school including, but not limited to, classroom work, library activities, physical education classes, official assemblies and other similar gatherings, school athletic contests, band concerts, school plays and other theatrical productions. (9), (10)
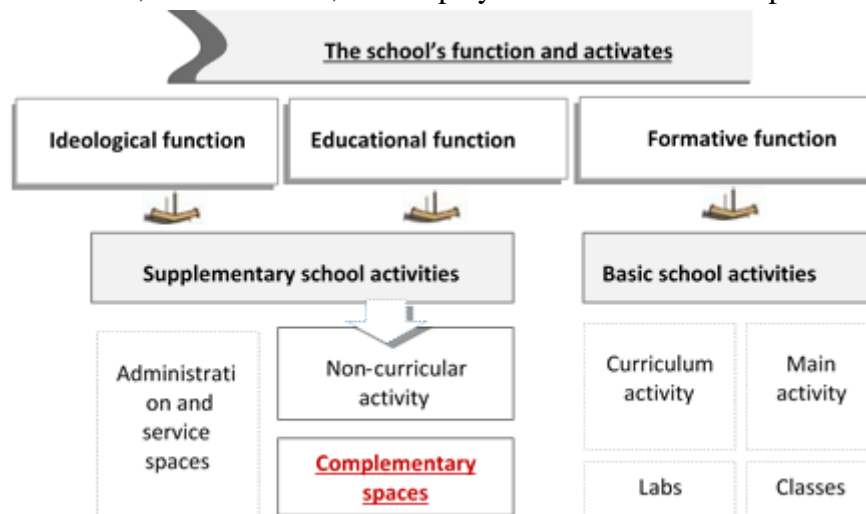

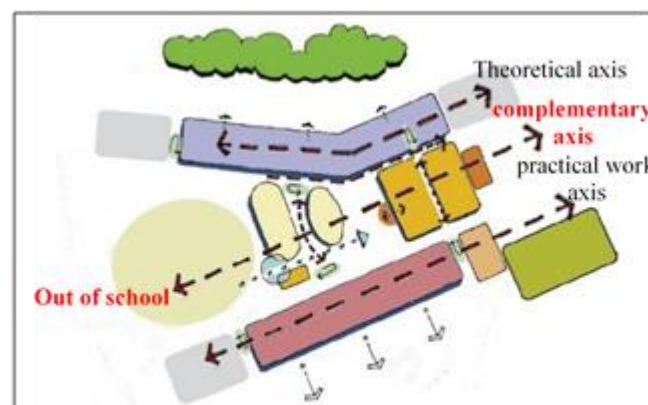Fig.8: School's function and activities. Ref: (9), (10)

Fig.9: School's axis. Ref: (9), (10)

Fifth: Objectives of the (supplementary) school activity:

The more comprehensive definition of the school activity is that it is an integrated part of the school curriculum voluntarily practiced by students (with self-motivation) to suit it with their different tendencies and abilities and includes multiple areas to satisfy their physical, mental, psychological, and social needs, and through it, students can gain many experiences, each according to their stage of development.

Breeders unanimously agree on the natural activity in the activities that you get in certain stages, scientific and social. This is as follows: (11), (12)

Fig10: The school's activity goals. Ref: (9), (12)

Educational goals in:

•Training students to love, respect, and appreciate work.

•Upbringing students to plan and organize work and assign responsibility.

•Upbringing students on cooperative work and sportsmanship.

•Training students to make use of their free time to benefit them.

Cultural goals in:

Creating educational situations that are favorable to the same student and providing him with information and skills to be assimilated and learned to achieve the objectives of the prescribed school curriculum.

Scientific goals in:

• Deepening the educational effects of educational life.

Social goals include:

•Treatment of some cases that some students suffer from, such as shyness, reluctance and introversion.

•Linking school life to social life.
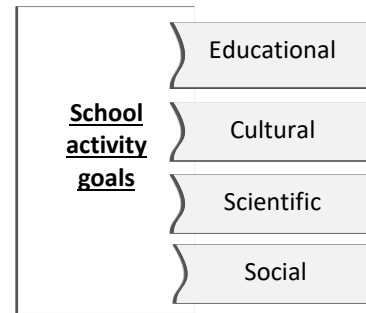
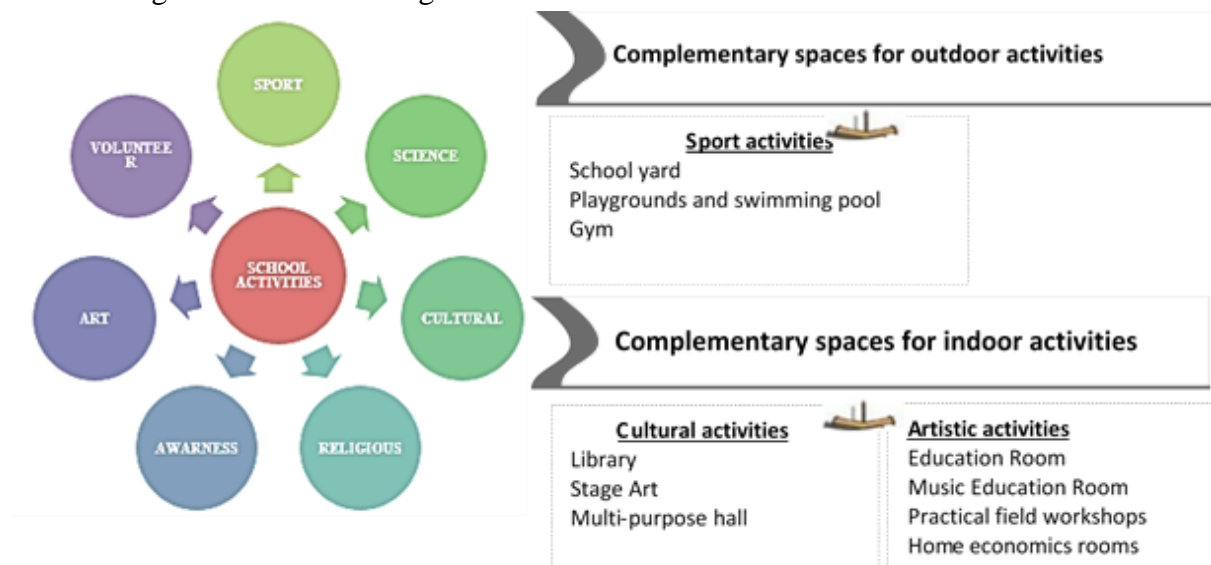Discovering talents and directing them in reform.

Fig. 11: The components of the supplementary axis in the school. Ref: (11), (12)

Sixth: The functional relationships of the complementary spaces

The functional relationships of the building elements are considered one of the most important steps that govern the design process and fundamentally affect the efficiency of the building's performance of its function with the least amount of conflict paths and overlap of uses. The general functional relationships of basic education schools can be clarified and distributed (according to the homogeneity of activities, noise level, and traffic intensity) in order to achieve the smooth running of the building with the highest efficiency.
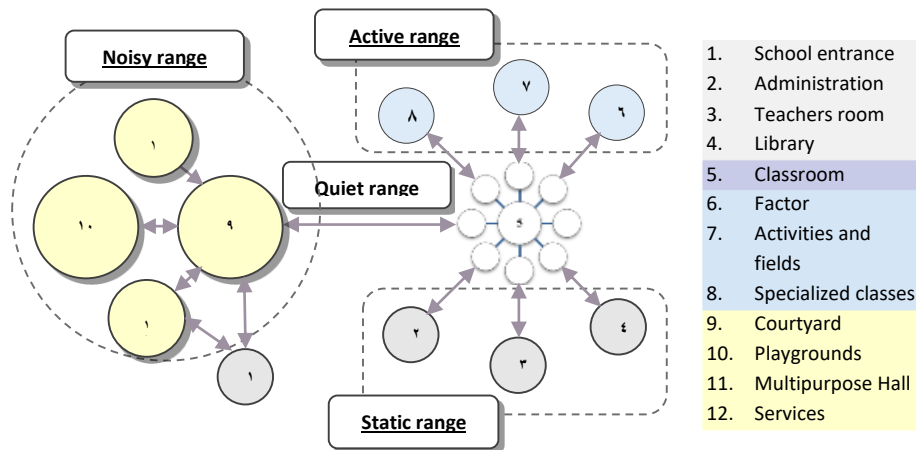

FIG 12: THE FUNCTIONAL RELATIONSHIPS OF THE COMPLEMENTARY SPACES. REF: (13)

There are considerations specific to each element of the school, such as its use from a public entrance, the availability of escape doors for it, or its proximity to the entrance of the administration and students, its connection to internal or external corridors, the availability of service entrances for it, taking into account the optimal guidance for it, its presence in a relatively or totally quiet area, being in direct contact with the stadiums, or ease of dealing with visitors. (13)

Seventh: Community - joint use of school facilities:

Joint use of school facilities is the use of school-district-owned facilities by a non-district entity. Because all community users of school facilities—which include members of the public, private organizations (both non-profit and for-profit), and public agencies—are non-district entities, the terms "joint use" and "community use" are often used interchangeably. In this paper, we use the term "community use" to describe the activities undertaken by non-district entities in school facilities and the term "joint use" to describe the relationship between the parties that the policies and other tools facilitate. (14), (15)

<u>Benefits of Community Use</u> (16), (17)

• Better Schools: Expanded programs and services for students.

• Better Communities: Increased integration of schools and communities; greater reach for programs serving the community.

• Child and Community Health: Expanded opportunities for physical activity.

• Environmental Benefits: Increased Conservation of Land

through a reduction in the number of sites needed to deliver public services; decreased traffic and transportation costs through the delivery of services in locations that families frequent.

• Fiscal Efficiencies: Reduced public expenditures through the elimination of duplicative services and costs across public agencies.

• Fiscal savings for school districts: Recovery of facilities costs through increased rates of facilities utilization and revenues from no district users.
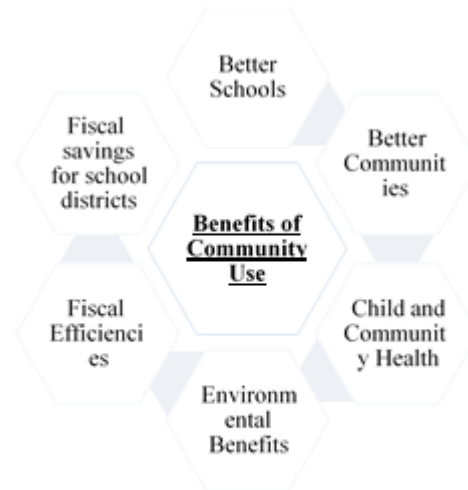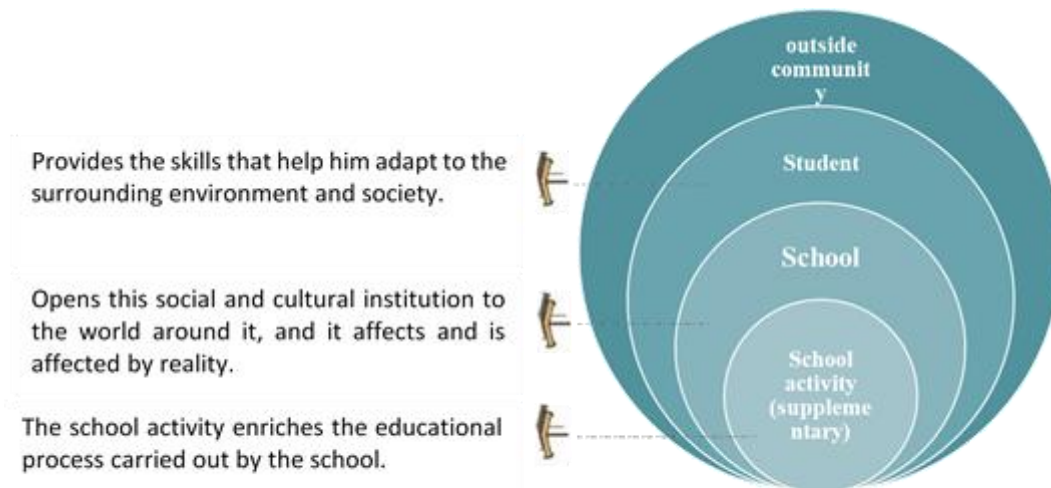

FIG.13: BENEFITS OF COMMUNITY USE. REF: (16)

Fig.14: School activity (supplements) and outside community. Ref: (16),(17)

The integration between schools and communities

According to the International Conference "Schools as Community Hubs-Use, which was held on December 3 and 4, 2020, at the University of Melbourne, Australia, to examine the trend of how schools evolved into community centers through their shared facilities, with the objective of forging greater partnerships, the trend has been summarized into four main groups: (17), (18)
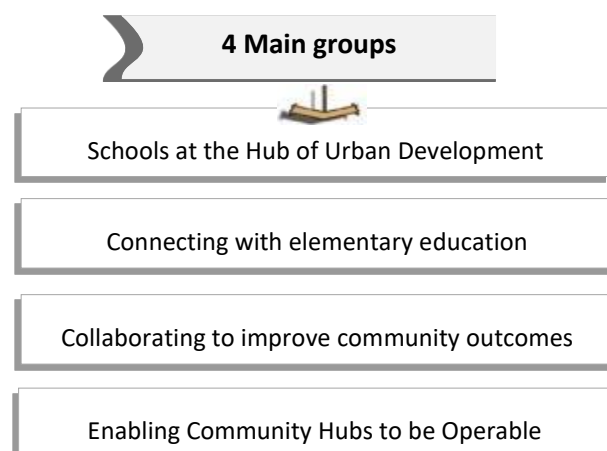
•Promoting societies with greater social cohesion.

Fig.15: 4 main group trends according to the International Conference "Schools as Community Hubs- Use". Ref: (18)

•Reconnecting education with real-world experiences and enabling learning anytime, anywhere, with anybody.

•Prudent, cooperative use of resources through joint usage initiatives and collaborations.

•Enabling community hubs to be operable.

Eight: Analysis of the study model for a foreign and local school:

Mechanisms for identifying study cases

 The case studies are based on the analysis of one of the most important schools in Australia, whose complementary space was re-addressed and integrated with the surrounding community in accordance with global trends and indeed achieved amazing success (18). Then, an analysis of a group of government pre-university schools in one of the new cities, Sheikh Zayed City, and its oldest neighborhood, which is the First District. (19), (20)

The methodology used in presenting the case studies

Follow the analytical approach to present the study cases in table 3, 4 through three stages: General information, the reasons for choosing the region to study, vision and goal, specific needs for the target region, analysis of the current situation in the region and conclusion.

Schools as Community Hubs, YSH School
General information:

Location: Australia

Stakeholders: Hay Ball Architects works in partnership with School Infrastructure NSW (SINSW), Young High School (YHS), Hilltops Council, State Libraries NSW, community service organizations, and local residents of the Hilltops Local Government Area.

The biggest obstacle to creating and carrying out a shared usage project is getting all stakeholders to agree on the vision and the operational needs. A joint usage project won't be viable without adhering to a common vision.

The reasons for choosing the region to study:

One of the most important schools that implemented the four global trends stipulated in the conference and achieved remarkable success through its role in social participation in the region.

Vision and Goal:

•The project shows how two former institutions may be successfully combined to establish a new community learning hub in the regional center of Young, NSW.

•Establishing a common vision and a commitment to it, determining the guiding design principles, and comprehending and integrating the numerous sets of policies, laws, and needs of multiple government agencies were fundamental milestones in this project.

•Maximizing mutual benefit while minimizing the required area and budget—achieving more for less.

| Specific needs of the target region. |
| --- |
| The following requirements were identified:
•A new community library
•A cultural precinct
•Facilities for the Arts-Community/ Arts space(s)
The library was always intended to be a joint-use facility for everyone's benefit, arising out of these common community needs. |
| **Analysis of the current situation in the region** |
| A grand courthouse was constructed in 1884. An open public space known as Carrington Park is located just to the north of the current location. Currawong Street, which once separated this from the school site, has since been dismantled. The Grand Courthouse has a unique direct frontage to Carrington Park as a result of Currawong Street being removed.
It was chosen because it could give the local community easy access to and from the nearby park and because it would help restore a physical and visual link to the Grand Courthouse.
Forms and detailing of the facility were determined through consultation with stakeholder groups and derived as a result of:
The courthouse's scale and mass; the site's historic setbacks and subdivision patterns; the courthouse's sightlines; the height of its façade features.

 |
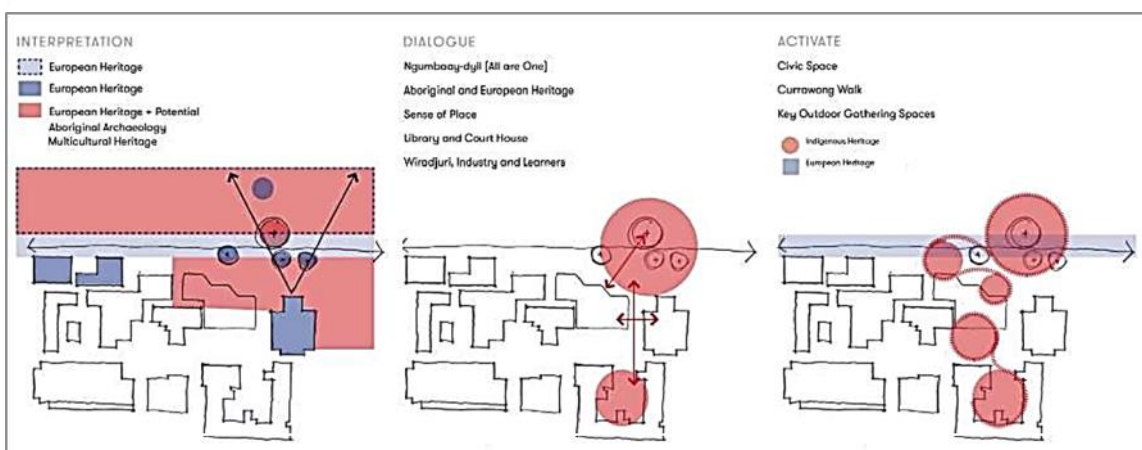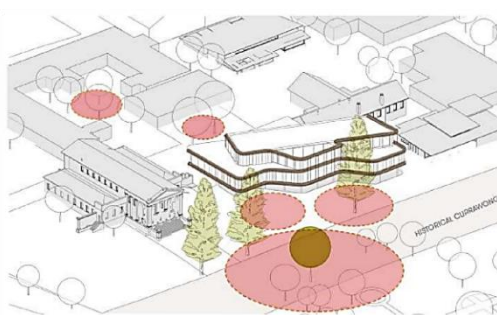
Designing an integrated building that simultaneously satisfies the demands of the school and the community presented significant problems, particularly in the following aspects:

Access, security and Seamless flow between related functional areas.

The floor plan was determined through careful zoning of community areas, joint use spaces, school spaces, staircases, and elevators, access is enabled for community usage of the joint use facilities outside of school hours.

The layout makes it possible for several community organizations to use the space simultaneously, benefiting the school and the neighborhood to the fullest.

Community access is provided from Carrington Park and the Currawong Walk.

• The yellow zone is intended for "community" usage and allows for pursuits like reading, gathering, working on projects, exhibiting work, and storing things.

• These communal areas are also used by school users under supervision during school hours; the blue zone is reserved for educational purposes by making a reservation, and community members may utilize these areas after school hours.

• Vertical circulation is given separately for each zone. So, community members can visit any level after hours without passing through the school or shared zone, while school users can freely move across the floors inside the blue school zone. Within the common zone, additional vertical circulation channels are accessible to all users.
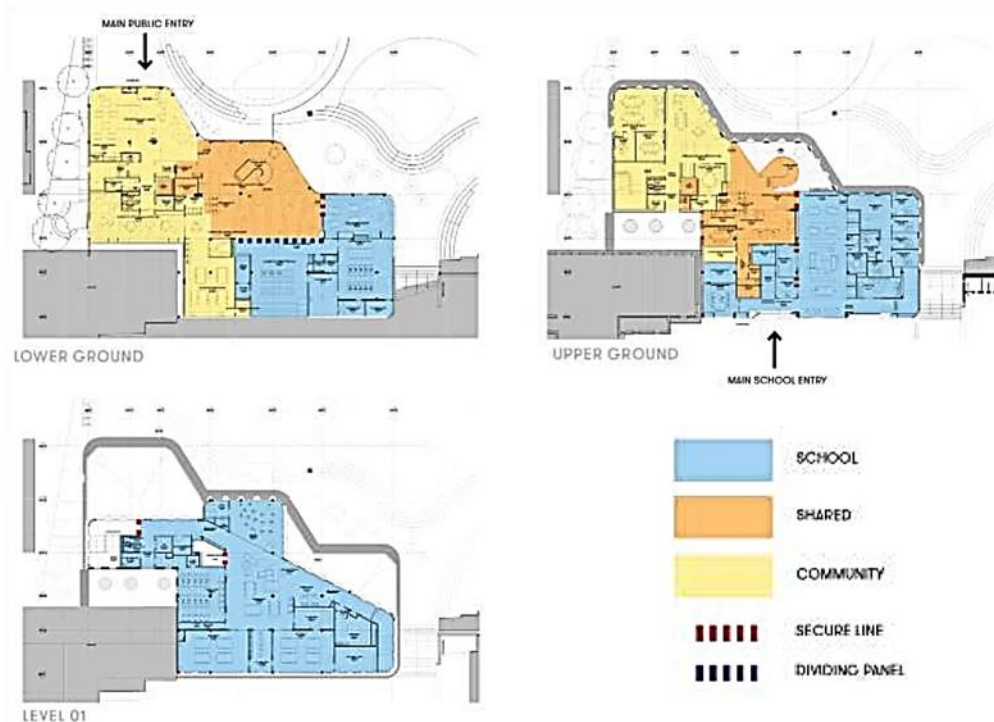
Conclusion

A crucial component of the project's success has been an understanding of the location and the people that will use the facility. A highly integrated, adaptable facility that meets the needs of the school and community has been created because of a strong common vision and a clear identification of needs. In addition to fostering community development and whole-life learning.

The business case for the project proved a favorable benefit-to-cost ratio (BCR) for the establishment of a joint library and community learning facility through a combination of SINSW's four guiding principles for community hubs.

As a result of stakeholder engagement and the scrutiny of the Project Reference Group, a schema for the joint use of libraries and other spaces that the community needs.

Table 3: Schools as Community Hubs, YSH School. Ref: (18)

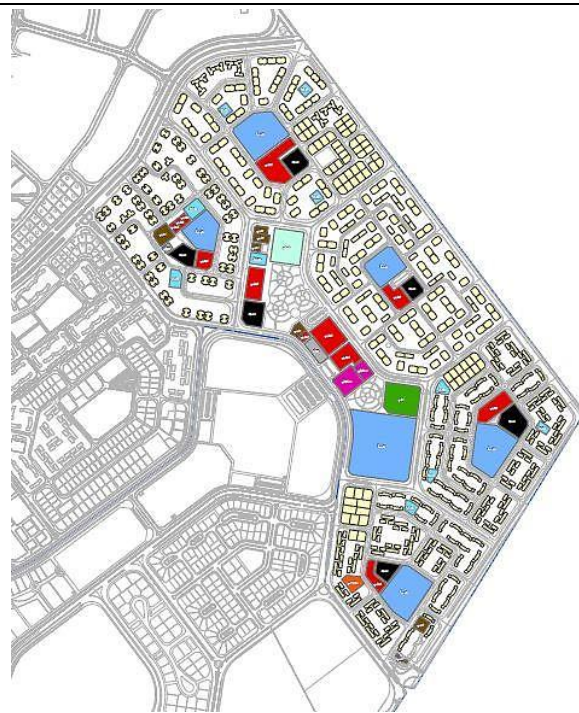| Sheikh Zayed City, The first district |
|---|
| **General information:** |
| **Location:** |
| Sheikh Zayed City, the first district: |
| The first district is located at the entrance to the city, and it has five residential neighborhoods, each of which contains a school, a mosque and some commercial services in addition to the neighborhood center and its services. |
| **The total area of the neighborhood**: 1134969 m². **Total population of the first district:** 36,980 |
| |
| **The Reasons for choosing the region to study:** |
| •It is considered one of the oldest neighborhoods in Sheikh Zayed.
•It has a huge population.
•The lack of cultural and sports services in the area as stipulated by the requirements.
•The difficulty of re-planning and building the area to provide these services.
•The presence of some of these services outside the neighborhood and the difficulty of accessing them are not sufficient to accommodate the requirements of the neighborhoods and residents. |
| **Vision & Goal:** |
| In the proposed study example (the first district in Sheikh Zayed), it aims to achieve the highest benefit by re-operating the cultural and sports service spaces for those schools through collective participation through the residents of the neighborhood and making them educational and culturally qualified for public use in the neighborhood to compensate for the shortage.
Therefore, schools in the region will be selected, and evaluation criteria will be established to find the most qualified schools.
The location of each school in relation to the neighborhood, its accessibility, the available cultural and sports services, and its spaces will be determined for the evaluation work and determining how to make the best use of those spaces. |

Specific needs to the target region.

percentage	Total area	No of lands	Usage
17%	190301.83	430	Residential
0%	1840.84	1	Social
8%	86504.42	6	School
1%	11336.68	10	Nursery
1%	7248.61	7	Administrative
1%	8226.64	1	Security
0%	2708.37	2	Parking
3%	34955.54	12	Commercial
1%	7980.10	1	Healthy
1%	5740.43	2	Future
2%	20815.66	6	Mosque
33%	377659.13	874	Total
67%	757310.20	Green areas and roads	
100%	1134969.32	The total area of the first district	

The district needs a new community library, a cultural precinct and Facilities for the Arts– Community / Arts space(s).

Analysis & evaluation of the current situation of the region

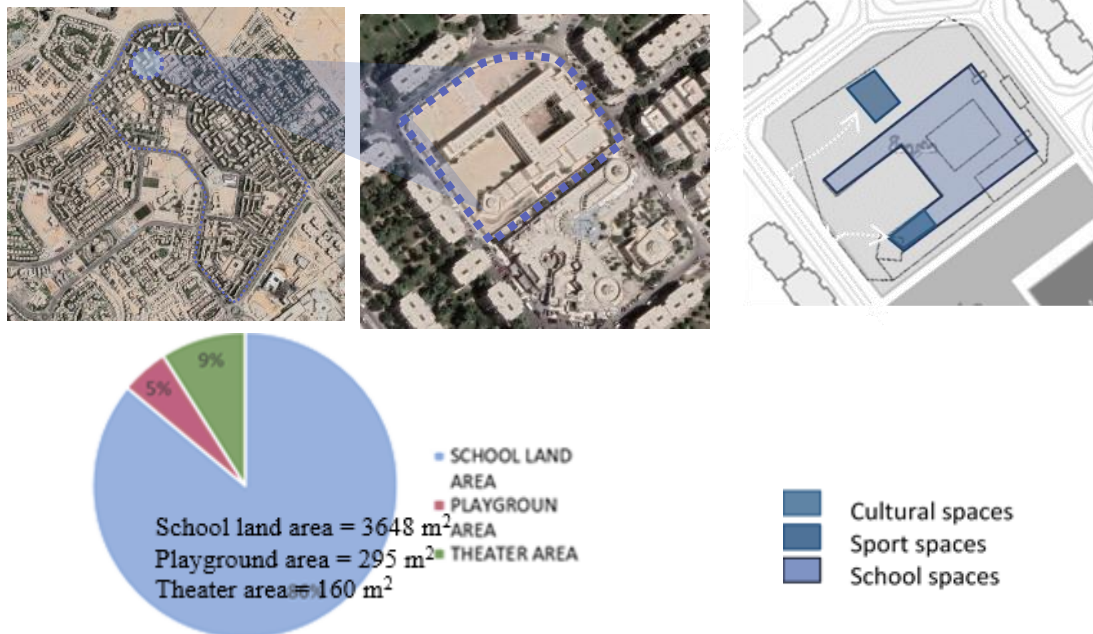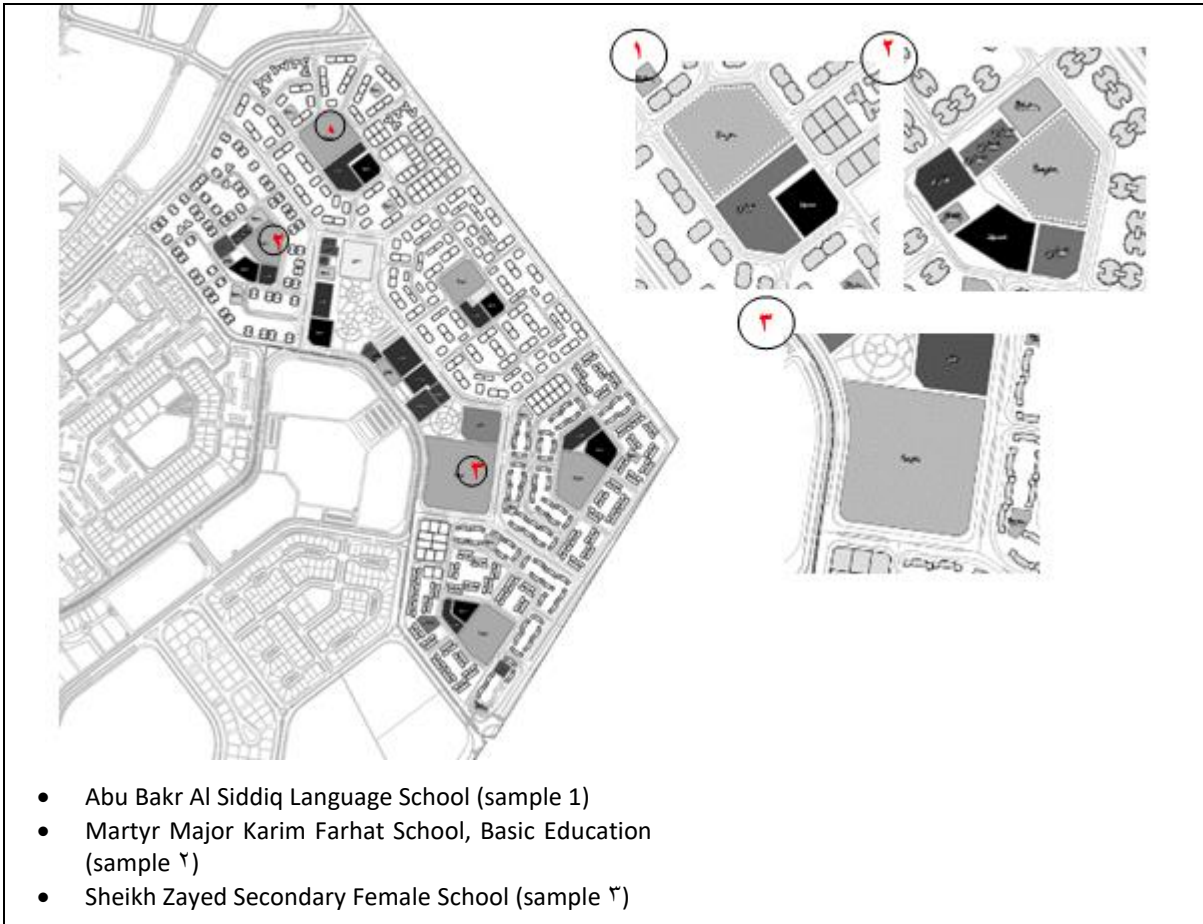**Population The first district of Sheikh Zayed**

- Average family size 4.3 per housing unit
- Number of floors (ground + 4 floors)
- The number of residential units on the floor is 4 apartments

Total population = 36,980 person

- Residential (430)
- Social (1)
- School (6)
- Nursery (10)

- Administrative (7)
- Security (1)
- Parking (2)
- Commercial (12)

- Healthy (1)
- future (2)
- mosque (6)

- Abu Bakr Al Siddiq Language School (sample 1)
- Martyr Major Karim Farhat School, Basic Education (sample ٢)
- Sheikh Zayed Secondary Female School (sample ٣)

School land area = 3648 m²
Playground area = 295 m²
Theater area = 160 m²

- Cultural spaces
- Sport spaces
- School spaces

- Ease of access to the school because it is surrounded by streets from all sides and has a direct connection to a main street.
- The possibility of exploiting the playground and the theater due to their location and easy access to them from the street.
- It is on the outskirts of the district.

- While it is characterized by easy access to it and the availability of cultural and sports services in medium-sized areas.

Cultural spaces
Sport spaces
School spaces

School land area = 970 m^2
Playground area = 120 m^2
Theater area = 110 m^2
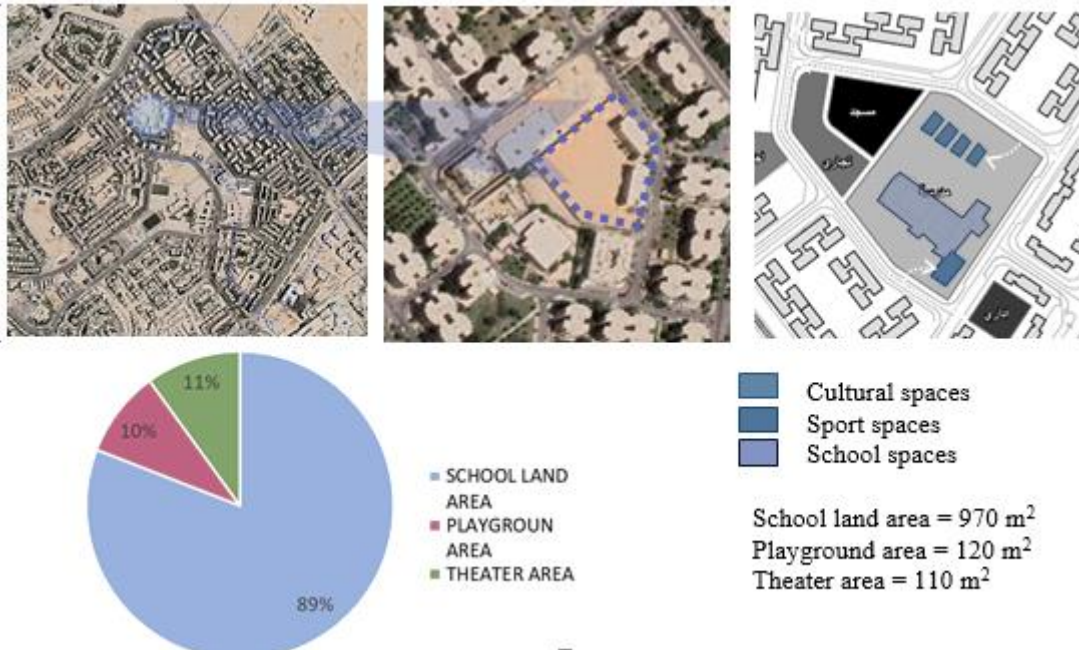
- Easy access to the school but lacks direct connection to the main hub.
- The possibility of exploiting the playground and the theater for their location and easy access to them from the street.
- It is on the outskirts of the district.
- While it is characterized by easy access to it and the availability of cultural and sports services in medium-sized areas.

Cultural spaces
Sport spaces
School spaces

School land area = 5485 m2
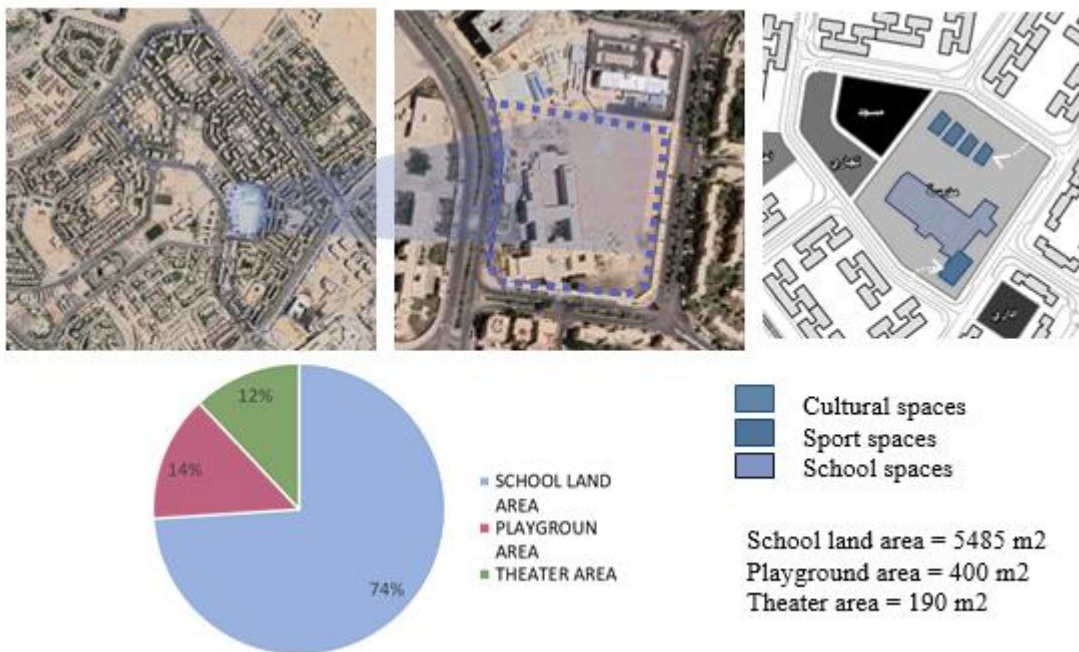Playground area = 400 m2
Theater area = 190 m2

• Ease of access to the school because it is surrounded by streets from all sides and has a direct connection to a main street.

• The possibility of exploiting the playground and the theater due to their location and easy access to them from the street.

• It is on the outskirts of the district.

• While it is characterized by easy access to it and the availability of cultural and sports services in medium-sized areas.

Conclusion:

• Through the initial analysis of "pre-university education schools in the study area", in terms of the location of each school, ease of access to it, and the availability of complementary spaces and "facilities" that can be involved in the community service process.

• We find that Sheikh Zayed Secondary School for Girls (Model 3) is the most efficient, and the work plan can be applied to it, as the school is located and easily accessible from the centres of the neighbourhood and its outskirts, with the availability of large and good spaces for cultural and sports activities that can be exploited to serve the surrounding community.
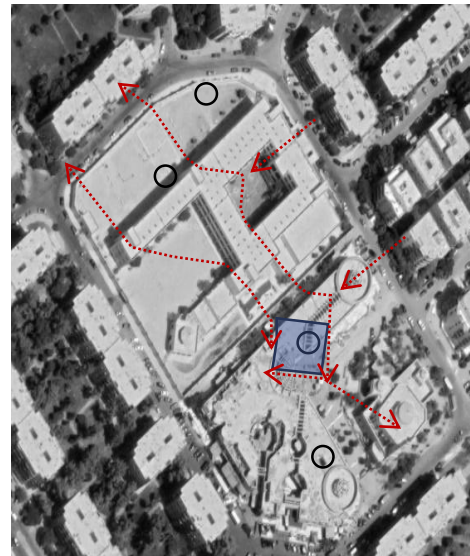

Table 4: Sheikh Zayed City, The first district. Ref: (19), (20)

Ninth: Conclusion & General components of the proposed plan

Schools are much more than educational institutions. They are hubs for our communities, through community partnerships, leveraging underutilized school infrastructure, and well-designed service integrations, schools can provide social inclusion and economic participation at the level of each community.

The proposed plan of four successive stages, as follows:

First stage: Analysis and assessment of the current state of the region; this step is related to starting the process. Second stage: Building a base for the region with GIS maps. Third stage: Develop a plan to deal with the region. Fourth stage: Post-operational follow-up and evaluation.

Develop a plan to deal with the region			Third stage
Drafting a plan & participatory management with Exploiting existing schools.	Evaluate the proposed alternatives and select the most appropriate.	Offers suggested alternatives.	Generating ideas and alternatives.

"post-operation follow-up and evaluation"		Fourth stage
Analysis of the results.	Measuring the extent to which the living conditions of the community have improved comprehensively.	Periodically, review development plans and interventions.

Recommendations:

Based on the results of theoretical and analytical research study, there is set of recommendations in different levels. Those recommendations can be summarized as follows:

Recommendations for planners:

•Study all the planning goals achieved by the school, given its direct impact on the surrounding community, in terms of the use of those spaces.

•Organizing the exploitation of complementary spaces according to a comprehensive community development plan, to achieve maximum benefit from them.

•It is necessary to develop external extensions for complementary spaces according to the suggested plan.

•Reviewing planning policies periodically, and creating a flexible framework for the possibility of modification according to the needs of the surrounding community.

•Supporting the participatory framework "the cooperative relationship between individuals and responsible authorities" through which an agreement is made to achieve the general goal of the project.

Recommendations for Legislative Bodies:

•Providing cultural, sports and artistic services in proportion to the population in each region, in accordance with established official plans.

•The need to comprehensively consider all the community's needs for various services, to avoid duplication of efforts as a logical result of lack of coordination.

•Adopting a unified and comprehensive definition of the underserved community, to help identify needs.

•Establishing binding laws to take into account the planning and expansion dimension of school services in its surroundings to meet the needs of the population.

•Dealing with the urban development policy as the most comprehensive container of all policies, in a way that serves the community and achieves its maximum benefit from the facilities surrounding it, especially school buildings, which are located in every residential area in accordance with recognized planning principles.

Dr. Miran Essam Ahmed Monier ،assist. Lect. Mohamed Abd El Latif Mohamed El Mersawy ،a plan to deal with the supplementary gaps in the "pre-university education stage" to maximize its role in community participation in Egypt. ،Maǧallaẗ Al-ʿimārah wa Al-Funūn wa Al-ʿulūm Al-Insāniyyaẗ، vol10، no.51، May 2025

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Recommendations directed to those in charge of implementation and follow-up work:

•The necessity of periodically reviewing and evaluating city plans and residential neighborhoods at all stages of growth, in addition to measuring quantitative and qualitative community need indicators periodically to monitor community needs according to variables and work to modify them if necessary.

•Achieving the concept of community participation, in terms of the school's participation with community organizations, investors, and beneficiaries to benefit from the school's complementary spaces, such as the library and multi-purpose halls, and to benefit from the open spaces and green spaces.

•Each school uses an implementation plan within a flexible framework that accepts modification, to exploit its complementary spaces to maximize its role in community participation, while evaluating and monitoring the results it achieves and presenting them periodically inside and outside the school.

•Providing all information and educating the community about how to benefit from the community's use of school facilities.

•Providing administrative structures responsible for integrating the effective participation of the community in the process of determining their needs for various facilities, and how to optimally utilize school facilities in that process.

•Imposing fees for the shared use of school facilities, to achieve maximum benefit from school buildings by allocating the revenue to them.

•Calculate the operation and maintenance expenses associated with periodically used spaces, to correctly calculate community use costs and determine appropriate use fees.

Future Studies:

•Studying the activation of the role of the Educational Buildings Authority to conduct studies to develop the existing and future school building and its complementary spaces in a way that serves the surrounding community.

•Studying policies for developing residential areas in Egyptian cities and involving the school buildings located there as a main driver of the development process and community service.

•Studying the design and planning considerations for residential areas and the extent of integration between them to serve the future expansion of school buildings with their surroundings.

•Studying the possibility of creating a network of shared services, the main focus of which is the supplementary spaces in the school building to serve the community.

References:

1- human settlement data,2018, www.elsevir.com

2- https://www.capmas.gov.eg/ الجهاز المركزى للتعبئة العامة والاحصاء ٢٠٢٠. التقرير السنوي ٢٠٢٠

3- Ministry of Finance Arab Republic of Egypt. https://mof.gov.eg/en

4- Economic and Financial Data for Egypt, https://mped.gov.eg/assets/uploads/NSDP.html

5- https://www.egypteducation.info/k-12/egypt-k-12-education-system.html

6- https://www.scholaro.com/db/countries/egypt/education-system. Access in 2023

7- Standards and requirements for the validity of the site and school buildings. Public schools of basic and secondary education in existing cities and villages, The General Authority for Educational Buildings,2020

8- Ministry of Education, "Designing Standards for Basic Education Schools - Greater Cairo Region" Educational Building Planning Project (in cooperation with the US Agency for International Development). Cairo

9- citing M. Asaad Ali Suleiman Abu Ghazaleh, Eleventh International Al-Azhar Engineering Conference "Planning foundations and standards for basic education facilities and their impact on the urban development of Cairo", Al-Azhar University: Faculty of Engineering, 2010.

10- https://upload.wikimedia.org/wikipedia/commons/1/15/Encyclopedia_Americana_1904_vol_5.pdf Aces in July 2023

11- https://edustepup.com/en/school-activities. Access in 2023

12- other, Marjan laal & and. 2013. "Continuing Education, Lifelong Learning." *5th World.* Elsevier LTD, Procedia - Social and Behavioral.

13- https://www.egypteducation.info/k-12/egypt-k-12-education-system.html. Access in 2023.

14- The Australian Council for Educational Research, Literature Review Schools as community hubs, Ian Teo Pru Mitchell Fabienne van der Kleij Anna Dabrowski.

15- https://www.egypteducation.info/k-12/egypt-k-12-education-system.html. Access in 2023.

16- Schools as Community Hubs: Integrating Support Services to Drive Educational Outcomes, Michael B. Horn, Julia Freeland, and Stuart M. Butler. No. September 2015

17- Kaname Yanagisawa, "school planning and design with children's participation", Chiba university, Japan, 2007

18- Schools as Community Hubs International Conference 2020, Melbourne School of Design "The University of Melbourne 3-4 December 2020". https://sites.research.unimelb.edu.au/learn-network/home/news-and-events/schools-as-community-hubs-international-conference-2020 . Access in 2023

19- http://www.giza.gov.eg/Companies/Buildings/default.aspx

الهيئة العامة الابنية التعليمية. ٢٠٠٠ *المعايير التصـــميمية لمدارس التعليم الاساسى والثانوى.*

20- http://www.newcities.gov.eg/Default.aspx هيئة المجتمعات العمرانية الجديدة،