



## **City Identity Reflected in Art Craft School Student Projects at Sour Magra El Oyouun in Cairo**

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### **Abstract**

This paper addresses a very critical issue which concerns designing a project in a historical area meanwhile coping with the contemporary architecture with all its aspects and needs.

In this paper, authors represent a real experience with a group of undergraduate students from Arab Academy for Science Technology & Maritime Transport (AASTMT), Smart village. Those groups of students were required to design an “Art craft school and tannery museum” at the wall of “Magra El Oyouun” at “Masr el Kadima”.

This historical area had a very special historical and social nature and regulations which opposed a great challenge to the students, especially since all the tanneries now are being demolished and moved to the “Rubeiky”, including the old tanneries that should have been considered as a heritage worth conserving.

The course was conducted over 2 phases: Research phase and Design Phase. In research phase, students were requested to study 3 main aspects: Social, Physical and Building regulations.

All these studies beside the program of the project formed the identity of the projects which came out with a rich variety of ideas and designs and reflects in different ways the special character of this historical area.

The research conclusions, design process and the deliverables will be presented in this paper to show to which extent those group of students succeeded to achieve this goal socially and physically.

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### **Keywords**

Sour Magra El Oyouun; Art School; Tanneries; Urban Character; Heritage; Physical context; Social context

### **1. Introduction**

By the 1960's, the concept of identity appeared in the field of urban studies. For example, Kevin Lynch (1960) mentioned that, the image of the city has three – always appearing together –components; identity, structure, and meaning. He described the identity as “the identification of an object, which implies its distinction from other things, its recognition as a separable entity. It is not in the sense of equality with something else, but with the meaning of individuality or oneness”. Although, Lynch uses meaning as one of the component of the image of the city, he does not directly point out the spatial meanings of the city for its residents. His definition of identity refers to the noticeable features of the city, while the term “structure” refers to the spatial relations of those features (Rifaioğlu, Güçhan, & Djerbi, 2007).

In “Design 4 course” at the AAST, the main objective for the students was to start understanding the identity of architecture in project site along with Social aspect, in order to practice its importance within the design process.

In “spring 2018” course, Heritage aspect was of great importance in identifying the city identity and had to be embraced in architecture education.

According to the Amsterdam Declaration, Jokileh which took place in fall 1975, concluded that: “The architectural heritage will survive only if it is appreciated by the public and in particular by the younger generation. Educational programs for all ages, and should therefore, give increased attention to this subject.” (Embaby, 2014).

And so we realized our responsibility as educators to engage the students and young generations with this heritage, and at the same time face the challenge of the globalization and fulfilling the social needs.

The project assigned to the students was located at “Sour Magra El Oyoum” a very historical area with a very unique nature either physically or socially.

The students were required to study and analyze the zone from all aspects in order to be able to come up with a successful design that reflects the identity and needs of this zone.

Students were required to design an “Art crafts school, gallery, museum and a plaza”

In the coming paragraphs the project requirements, project research and project outcomes will be presented thoroughly.

## 2. Project requirements

Each student is expected to develop their architectural program including the number and type of spaces tailored according to their research outcomes and proposed conceptual design within the following categories:

Workshops: Pottery- leather- wood- other types decided by students Lecture rooms

Ateliers Administrative Areas Storage Spaces Toilets

Resting area and cafe´

Galleries for all the art school products Tannery and craft History museum

Indoor and outdoor extension areas Services (Kitchen, Toilets, Storage)

Sitting places

Restaurant/Cafe´ outdoor extensions Green Areas

In addition, each student is free to add further activity spaces with justifications according to survey.



Figure 1. A satellite image for the whole zone (Google earth)



Figure 2. A satellite image for the site with dimensions (Google earth)

### 3. Project research

As mentioned before in the abstract that the course was conducted over 2 phases: Research and Design

#### 3.1. Research requirements

In the Research phase students were required to do a research that covers the following studies in 4 weeks:

- Historical background
- Environmental studies
- Physical context including:
  - Urban fabric
  - Urban character
  - Site analysis
  - Land uses
  - Heights
  - Landmarks
- Social context including:
  - Identifying main users' of the project
  - Identifying user needs assessment and problems
  - Surrounding touristic attractions

- Local and International precedents
- Building regulations since this area falls within the boundaries of historical areas that undergo the regulations enforced by “National Organization for Urban Harmony”.

Deliverables of Project Research were as follows:

- Tree of Objectives that will help them reach their Concept Keyword.
- Program guidelines for the project

In each phase we introduced and clarified the tools and how to do this phase through series of lectures:

Lecture one: focused on the meaning of SOCIAL DIMENSION OF DESIGN, Surveying methods and how to Observe and document Activity Settings using activity mapping tool and how to identify all user groups and how to do an interview and questionnaire to discover and explore the local community real needs and problems.

Lecture two: focused on **Objective Definition Analysis Tree** and how to use it as a project planning tool that helps to analyze and graphically break down **objectives** into smaller and more manageable parts.

The tree of objectives is divided into five levels as shown in figure (3):

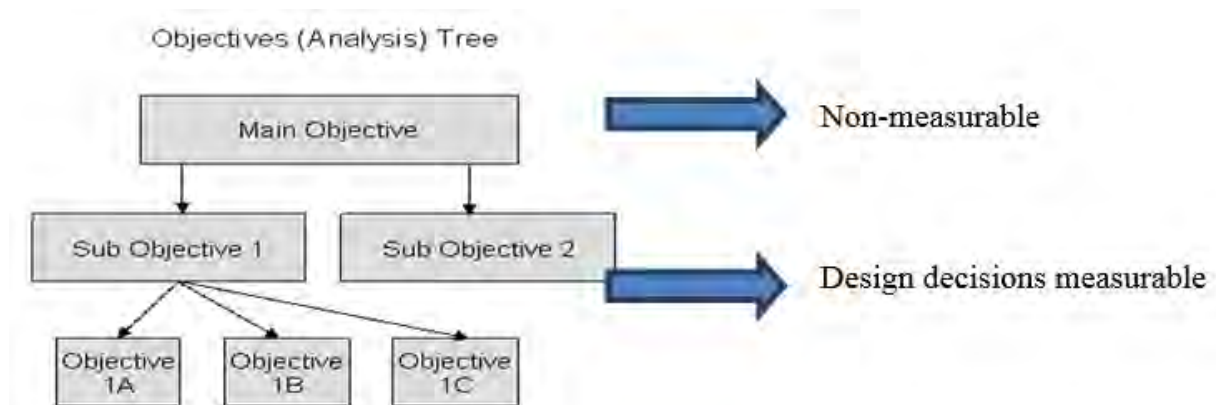


Figure 3. Tree of Objectives (Shehayeb, forthcoming)

Lecture three: this lecture reviewed the tools and methods to document the physical environment and architecture features

Lecture four: this lecture represented local and international examples of similar projects to expand their horizon and prepare them for the design phase.

### 3.2. Research outcomes

#### 3.2.1. Physical context studies main outcomes:

Urban Character: the tanneries wooden towers where they dry out the leather which gave a unique character to the site as shown in Figure (4).

Urban fabric: There is no main urban tissue that dominates the site, on the contrary there is a mixture between different urban tissues which gave flexibility to use it in the projects as shown in Figure (5).

Also in the solid and void map it showed how dense this zone is which cleared out the need for green open spaces as shown in Figure (6).



Figure 4. Tanneries wooden towers (Students research)

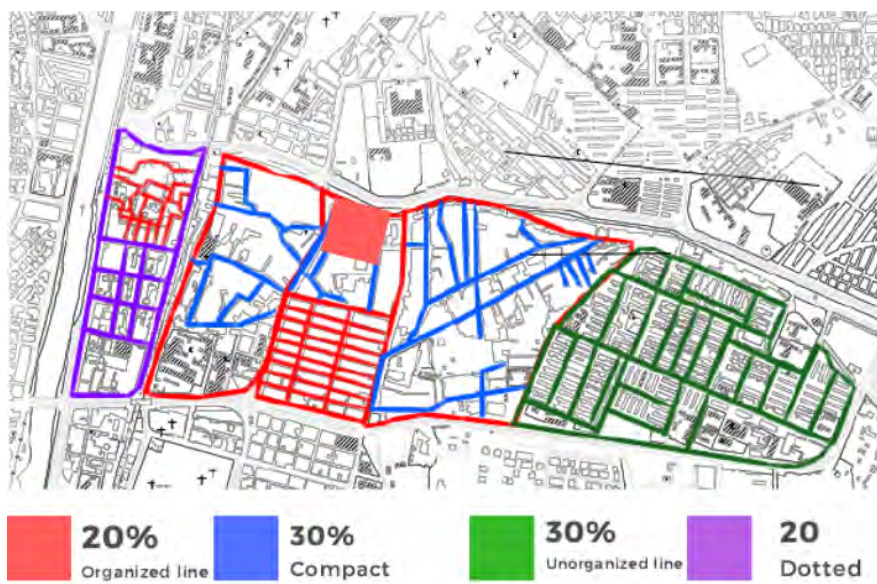


Figure 5. Urban Fabric (Students research)

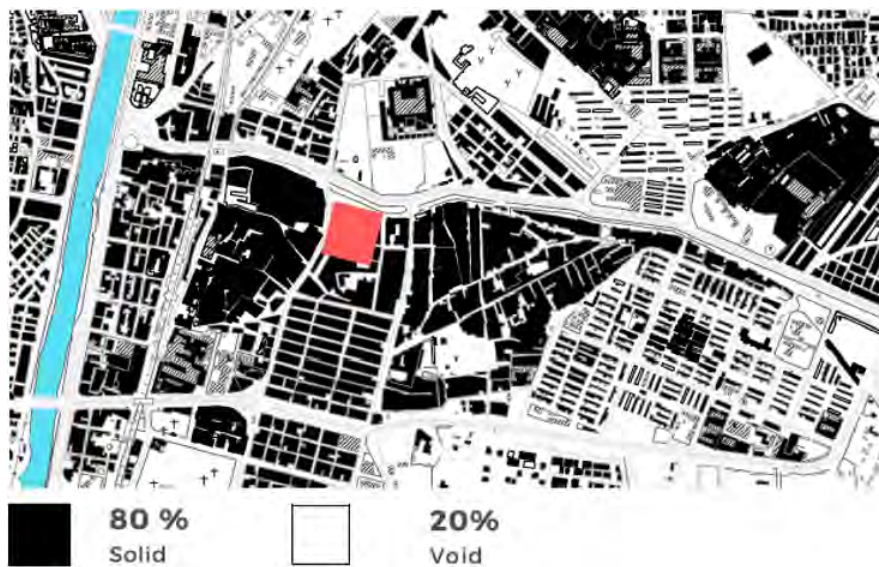


Figure 6. Solid and Void (Students research)

### 3.2.2. Social context studies main outcomes

Main user groups were found to be : local residents- art school students- tourists, also the demographic studies shows that 40% from resident are males and 60% are females and 60% are children as shown in Figure (7).



Figure 7. Demographic studies (Students research)

Students also worked on identifying the real needs of the three main user groups (local community – tourist – local visitors) by interviewing them and observe their behavior in the real environment using some giving tools from lectures as behavior mapping and taking systematic photos and sketching and so some social problems were raised during the course and students survey that had to be solved by the projects, these problems were mainly as follows:

- Unsafe life for girls in the location site, and they were being annoyed by boys, and so some projects were motivated to separate boys’ area from girls’ area, especially in the plaza.
- A lot of people were about to lose their jobs due to transferring the whole tanneries to “Rubeiky” zone so the project should be able to provide the community with job opportunities.
- The residents at the site didn’t appreciate the great historic value of the wall of “Magra el Oyoum” because they felt it isolated them from their surroundings and so the project should be able to enforce their feeling of belonging by using the wall in a way to upgrade their life through connecting the site with the touristic map.

### 3.2.3. Building Regulations studied outcomes

The location of the project falls within the boundaries of Historic Cairo which was set by the “National Organization for Urban Harmony” and so it falls under its building regulations as shown in Figure (8)

These regulations had a very important role in identifying the identity of buildings in these area and so the educators of the course were very concerned that students learn these regulations and try to apply as much of them as possible. Not all of these regulations apply to our project and so therefore main points were chosen, these regulations are to be explained in the coming paragraphs.

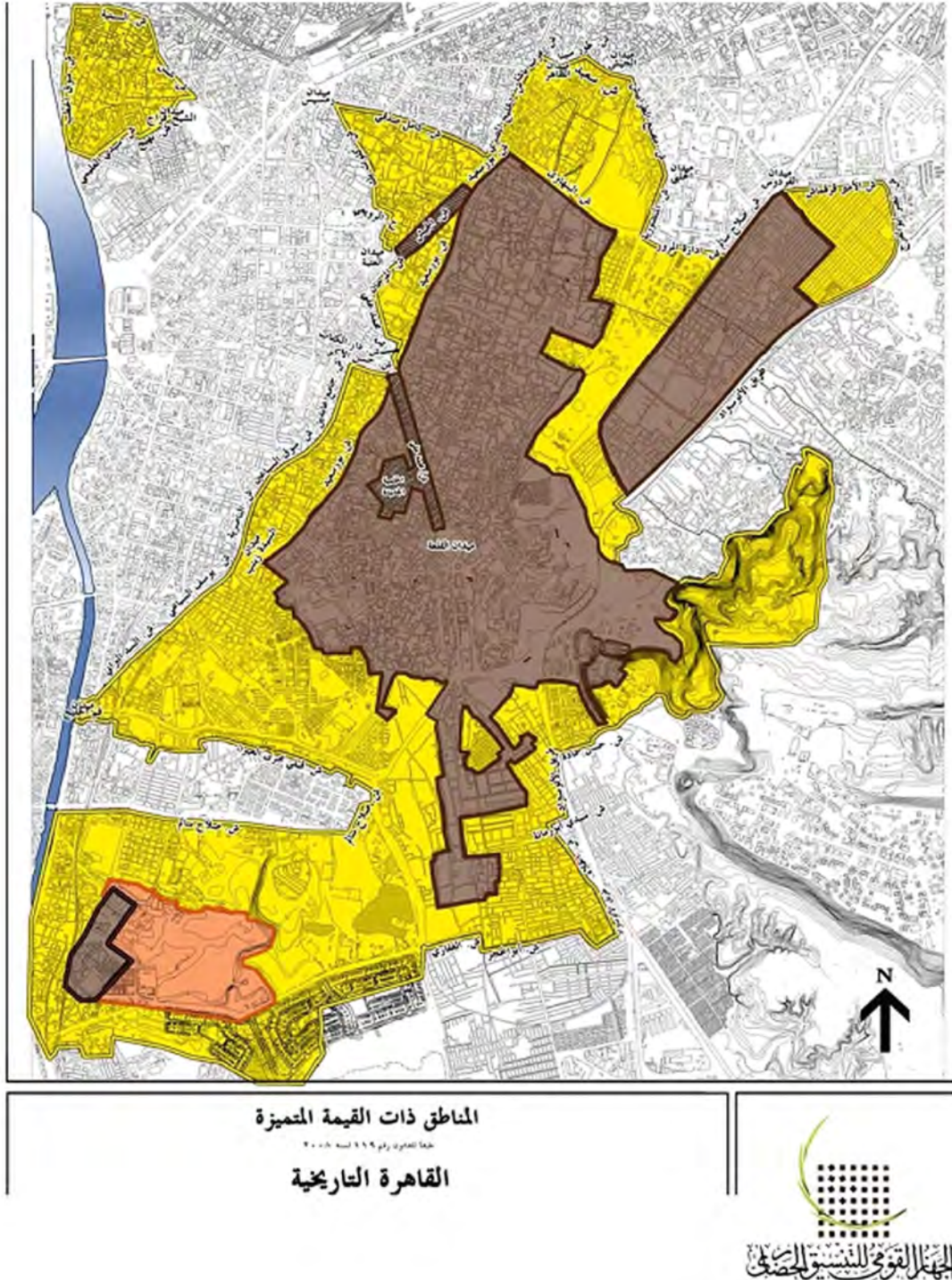


Figure 8. Boundaries of Historic Cairo zones under protection (National Organization for Urban Harmony)

3.2.3.1. Urban Fabric

1. Building should be built on land boundary, no recesses allowed.
2. Built area should not exceed 70% of land area
3. Buildings should form compact fabric like the old fabric and all void spaces should be in the form of courts or back yards in addition to the importance of vegetation of these spaces.

3.2.3.2. Urban Character

1. Buildings should be in harmony with Urban Character of surrounding area.
2. Unfamiliar architecture elements to the surrounding area should not be used.
3. Openings:
  - Openings should be rectangular in a vertical direction with a ratio not less than 1:1.5 (Horizontal :Vertical) and not more than 1:2 (Horizontal :Vertical), Openings in horizontal directions are not allowed.
  - Ratio of openings should not exceed 50% of the elevation.
  - Opening building materials should be Wood, metals are prohibited.
  - Clear or tinted (fume) glass are allowed but any other color or reflective glass or curtain walls are prohibited.
  - If openings ratio exceeds 20% then it should be covered with screens or “mashrabeya”.
  - Parapets should be in the form of wood or “faire forge” or walls with voids.
  - Heights:
    - Heights on streets less than 10m in width should not exceed 13m high.
    - Heights on streets more than 10m in width should not exceed 16m high.
    - Stairs and elevator wells may rise above the maximum height by 4 more meters.
  - Elevations:
    - Elevation colors should be beige or color of natural stone.
    - Natural stone cladding should be used or at least for the ground floor.
    - It is allowed to use paints in typical floors.

At the end of the course a questionnaire was given to the students to measure the importance of project research and its contribution in the projects outcomes and results are shown as follows:

Table 1. From your point of view, which of the following studies helped you improve your work?

	Very Important	Moderately Important	Not Important
Social studies	100%		
Physical studies	62.5%	37.5%	
Regulations of historical areas	87.5%	12.5%	
Environmental studies	100%		

Table 2. From your point of view, which of these dimensions were more important?

	Very Important	Moderately Important	Not Important
Social studies	87.5%	12.5%	
Physical studies	62.5%	37.5%	
Regulations of historical areas	75%	25%	
Environmental studies	50%	50%	
Concept generation	87.5%		12.5%

Project research outcome was in the form of: Program guidelines and Tree of Objectives which helped each student to reach a Concept keyword that was reflected later on in all project items: Layout-Plans-Elevation and sections.

### 3.3. Project outcome

There are many different styles of decision making, each with individual quirks as well as manifestations of common characteristics. Sometimes the unfolding of a design is strongly influenced by constraints derived from the initial setting of the problem, such as the context in which the building is to be built or its social purpose. On other occasions the process seems more determined by a designer’s personal attitudes and prejudices toward such things as functional expression or modes of fabrication technology. More often than not, there is a mixture of both orientations, as designers move back and forth between the problem as given and the tentative proposals they have in mind. ( Rowe, 1991 )

This led to large variety in the where each student had his own concept in, and there were a variety of concepts and objectives. Some student concentrated on social aspects, others on urban character and fabric and others were able to combine all, which produced a good variety within the projects as reviewed in the coming paragraphs:

#### 3.3.1. The impact of social studies on the components of the project

“Ahmed Shemisah’s” Project:

This project adopted most of the community needs through different levels: educational, recreational and financial levels, and succeeded to reflect them in the project’s components. In addition to respecting the surrounding urban fabric as it was also reflected in the morphology of the project.

Learn and work:

From the demographic studies done in the research phase, the students reached that there is a great percentage of the community under the age of 16 years and they were mostly uneducated, so he emphasized the value of learning through work. This can lead to a better education, which was reflected in the direct relation between the class rooms and the workshops to make sure that students can practice what they learn all the time, as shown in figure (9).



Figure 9. Showing gender separation zones (“Ahmed Shemisah’s” Project)

Gender separation:

Also from the social survey done, he adopted the idea of segregation between girls and boys classrooms, due to the community social and cultural habits, as shown in figure (9).

Playable Spaces:

As a result of the rarity of suitable play areas for the children in the local community this proposal intentionally made the project spaces more playful and children friendly, as shown in figure (10).

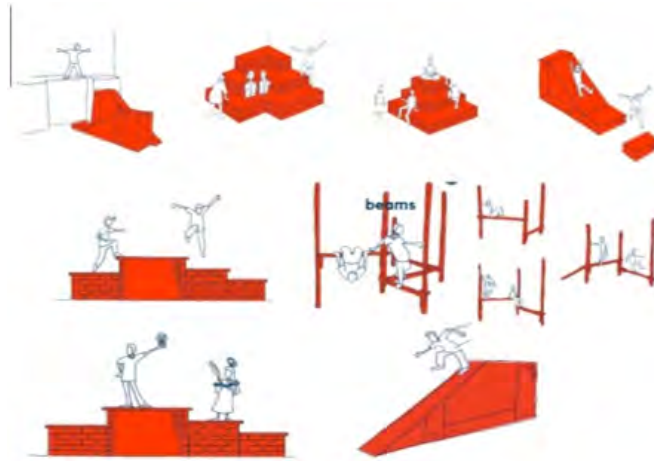


Figure 10. Showing playable spaces (“Ahmed Shemisah’s” Project)

Social interaction space:

One of the crucial things for achieving and maintaining sustainable tourism development is to create a positive interaction between residents and foreign tourists. And that’s what this proposal tried to do by creating lively opened public spaces to encourage the interaction between tourists and local community, as shown in figure (11).



Figure 11. Showing plaza (“Ahmed Shemisah’s” Project)

“Salma Omar’s” Project:

Empowering women:

Was her concept after the social survey and questionnaires done which showed the high percentage of working and family supporting women and since then the student adopted this concept by creating workshops and classrooms only for women besides providing a safe area for their kids to play nearby. She also made the 2 masses occupied by women in the plan oblique and different from the rest of masses, as shown if Figure (12).



Figure 12. Showing the rotated masses occupied by women ("Salma Omar's" Project)

### 3.3.2. The impact of urban fabric analysis on the project morphology

The project tried to match its surrounding urban pattern as part of making the new project familiar to the local community and to encourage them to interact with the new project, as it shown in figure (13). As well as saving the old daily pedestrian routes that goes through the site, as part of respecting the community behaviors as shown in figure (14).



Figure 13. Showing the project within its surrounding context ("Ahmed Shemisah's" Project)

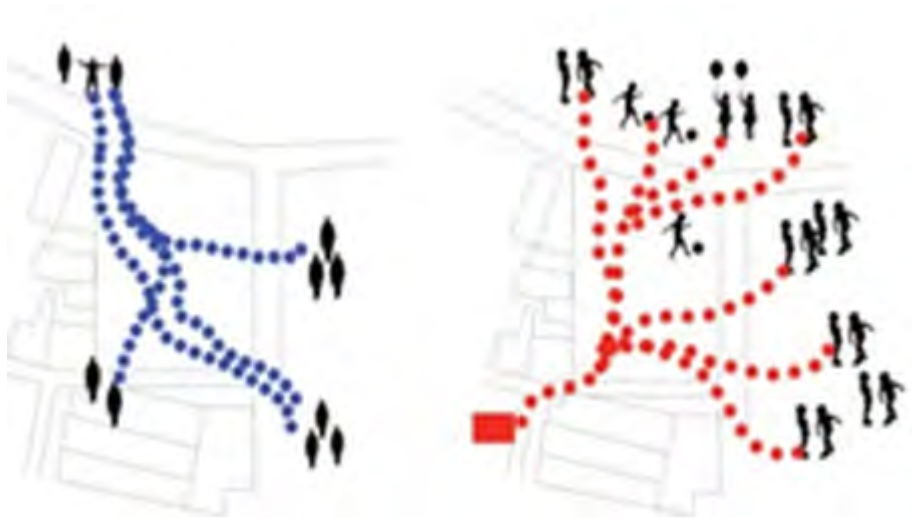


Figure 14. Pedestrian routes (“Ahmed Shemisah’s” Project)

3.3.3. The impact of urban character on the architecture details of the project: ”Ahmed Shemisah’s” Project:

One of the major elements that shaped the visual identity of Sour “Magra El oyoun” area is the tanneries’ wooden towers since they are part of the tanneries industry process. As well as the wall of “Magra El oyoun” itself which posed a great challenge that faced this proposal as it tried to reflect the tanneries tower by adding wooden shading devices on the top of the buildings and meanwhile deals with the wall as a part of the interactive plaza as shown in figure (15).

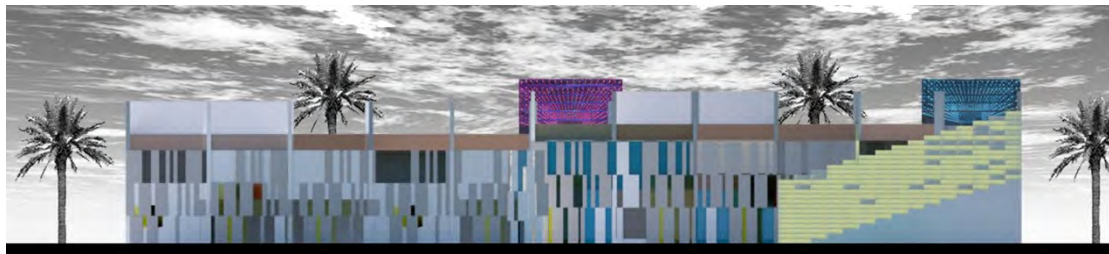


Figure 15. Elevation with abstract tanneries features (“AhmedShemisah’s” Project)

“Amr Aly’s” Project:

In this proposal, the student tried to take advantage of the historical value of the wall of the “Magra El Oyoun” ,by linking most of the project’s components to the wall by creating an inner plaza facing the wall to achieve transparency and visibility between project visitors and the context to deepen the value of the wall for visitors, craftsmen and craft school students, as shown in Figure (16).



Figure 16. Showing all the floors and spaces directed towards the Wall of “Magra El Oyoun” (“Amr Aly’s” Project.)

In addition to taking into account the architecture features of the area that came as a result of the prevailing craft activity in this area and the spread of tanneries which is characterized by wooden towers on the roofs of buildings, as shown in Figure (17).



Figure 17. Elevation with wooden shades to reflect the urban character ("Amr Aly's" Project)

"Ahmed Yousry's" Project:

The concept came from the need of reviving the memory of the industry that was moved out of the area.

He accomplished his concept by making the museum centered in the heart of the project and represented in the regular form of the old section of the tanneries and elements connected with the leather industry, which shaped the urban character of the area. Figures (18) and (19).



Figure 18. shows the museum mass in the center of the project. ("Ahmed Yousry's" Project)



Figure 19. Showing the Elevation with the wooden shades ("Ahmed Yousry's" Project)

#### 3.3.4. The impact of building regulations on the architecture details of the project

This project was committed to the building regulations of historic Cairo to the extent that his concept was based on creating the same experience of historic Cairo's streets and alleys and courts.

And so the masses were all built on the boundaries, no recesses left, and courts were the main open spaces that were used as plaza and as open spaces for workshops, as shown in Figure (20).



Figure 20. Layout showing building on boundaries and using courts (“Omar Abou Zeid’s” Project)

A questionnaire was given to the jurors to evaluate the projects and the following are the questions and results:

Q: To which extent has the selection of project’s topic reflected the site identity?

A: 100% % of the external jurors agreed that the selection of project’s topic reflected strongly the site identity Q:

To which extent have the students’ projects reflected the urban fabric of the site through layout and plans? A: 100 % declared that it was strongly reflected

Q: To which extent have the students’ projects reflected the urban character of the site through elevations and building materials?

A: 100% agreed that it was moderately reflected

Q: To which extent have the students’ projects reflected the social identity of the site through their plans, functions and forms?

A: 50% agreed that it was moderately reflected-50% agreed that it was strongly reflected

Q: To which extent were the students’ projects committed to the building regulations of the site? A: 100% agreed that it was strongly reflected.

#### 4. Conclusion

Selecting the project’s topic and relating it to the chosen site was intended from day one of the course because the instructors appreciated the great value of this area and saw the unique identity it had. The target was to help the students reach this same conclusion and start appreciating their countries heritage and try to reveal it’s identity through their projects.

The outcomes showed the deep understanding of both physical, social and historical dimension and all the students' work was able to reflect these dimensions and as they understand more the value of the wall of the "Magraa El Oyouun" they were able to produce more successful projects. The students also dealt with the project as an integrated project for the development of "Magraa El Oyouun" & the surrounding area.

The identity of this unique zone was achieved in the students' projects through the following:

Physically: through reflecting the urban fabric and character and complying with the building regulations which came out with masses and forms that would appear to be homogeneous with their surrounding yet succeeded to stand out and be attractive.

Socially: by the deep understanding of the main user groups needs and trying to solve the problems that were revealed during research phase and using the assets of the area that were neglected and poorly used by the local residents in order to strengthen their belonging to this beautiful place.

## 5. References

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