DESIGN FOR THE PROBLEMS IN THE CAMPUS OF UNIVERSITY OF TEHRAN

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ABSTRACT:

In this survey, problems in the central campus of University of Tehran were explored through the observations based on systematic, sustainable and universal design approaches. Frequency of the explored problems in the campus revealed that the majority of the problems emanated from **non-systematic procedure of security control at the main gate of the University**. So a system was generated to solve the said problem and some other holistic problems through the 3 aforesaid approaches which had interaction with the mentioned procedure.

1. INTRODUCTION

The basis of the first project of Master's course is to design for solving the explored problems in a specific environment. Solutions given through one approach without considering other interacted approaches can be problematic; solutions should be in a way that would save nature for future usage and finally the environment should be usable for all attending people with various abilities. Therefore Three approaches of Systematic, Sustainable and Universal design, were chosen in order to explore the current problems and to eventually present solutions to the most critical problems in the area to be dealt with.

University of Tehran was determined as the environment because of its critical importance not only as an educational venue but also as a political-religious center (due to Friday Prayer meetings held on the campus), so the main gate of the university was selected due to the importance of security. Then Fine Arts Faculty and the rest yard were chosen on the basis of the frequency of use per area.

2. METHOD

As the figure 1 shows, this project was done in 2 steps:

2.1 SURVEY

The parameters, aiming at exploring the problems through conducting 6 time observations of the site, are as follows:

Considering systems' and subsystems' roles and relations and interactions known as systematic approach;

Discovering material waste, environmental impacts, energy waste known as sustainable approach;

Failing to observe the 7 Universal Design principles;

Observing the people daily behavior at the campus;

The explored problems were categorized via KJ method. Afterward their priority was determined on the basis of their frequency on the sites.

Prioritizing the explored problems helped distinguish the most significant problems and the areas requiring immediate attention.

2.2 DESIGN

The brief face of design was determined after investigating the holistic problems of the critical site. Some innovative methods such as brain storming and 5 WH. Questions were used as a means to generate the comprehensive solutions as a system, product and service. (Fig. 1)
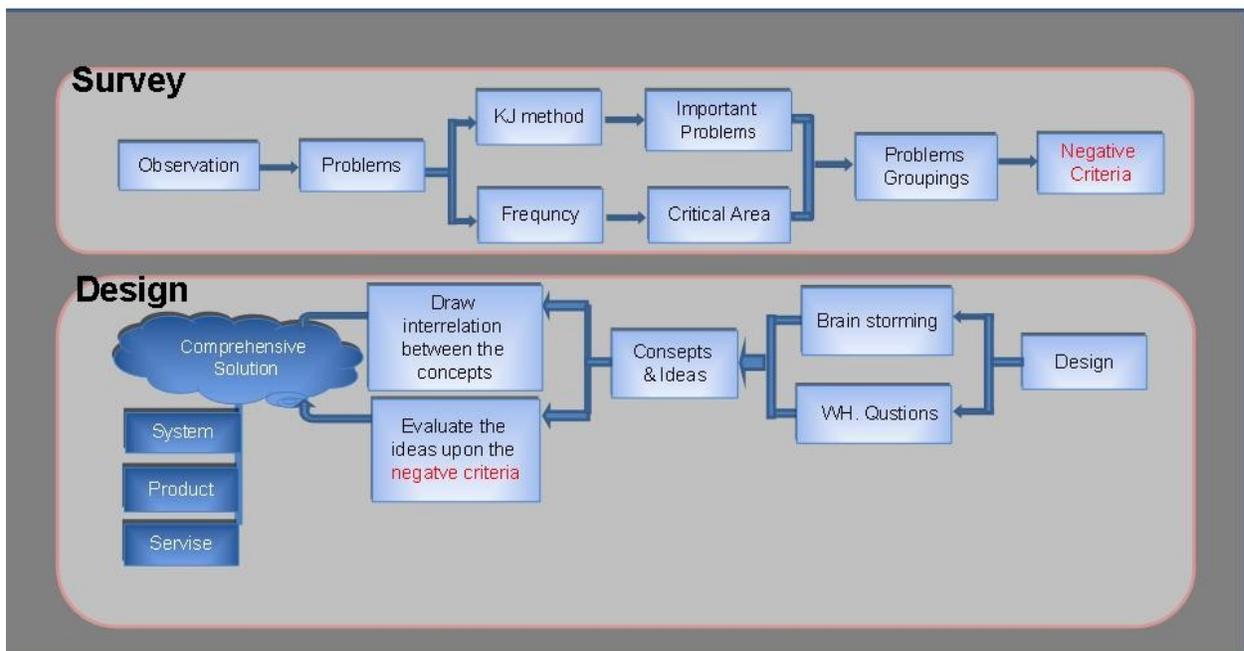

Figure 1: Method

3. RESULT

According to the above-mentioned procedure, 87 problems were explored throughout the observations. (Fig. 2)
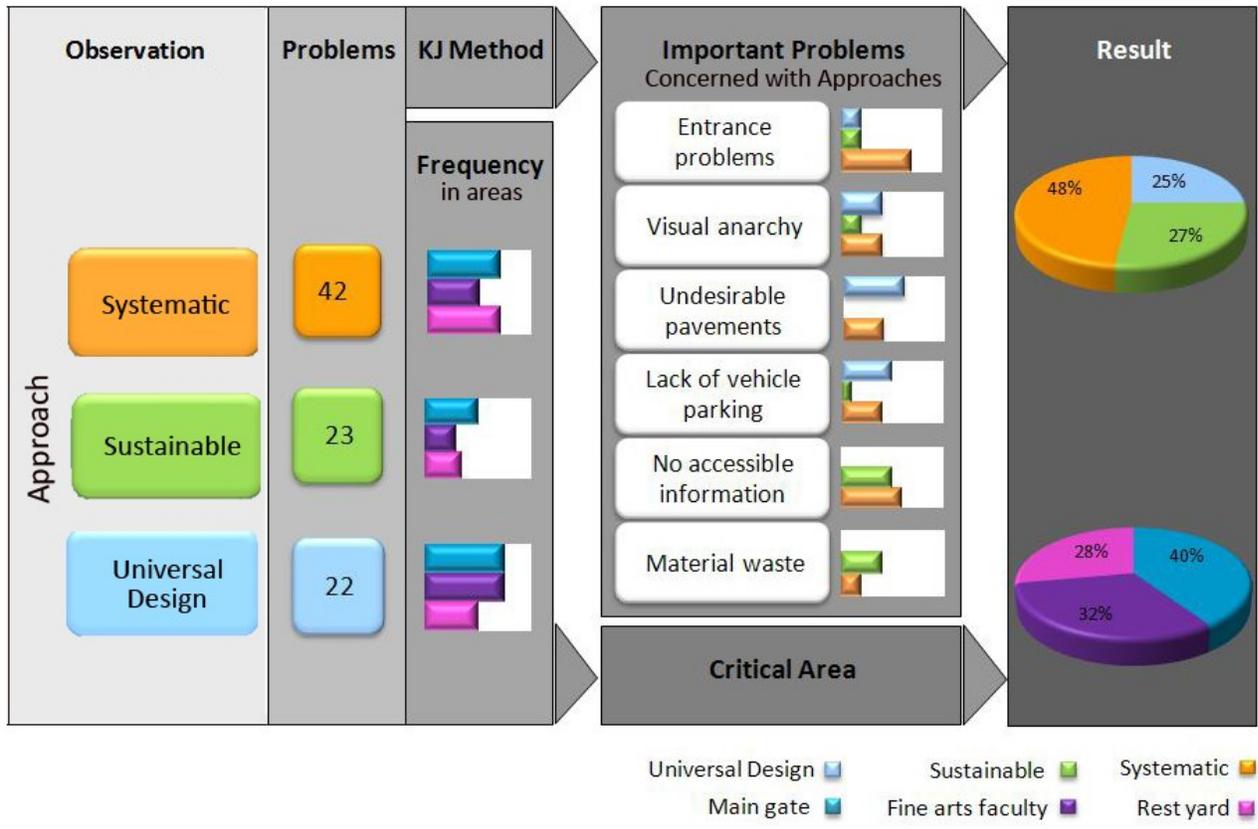
Figure 2: Result of the observations

The result of the observations showed that the majority of problems emanated from:

Non-systematic procedure of entrance;

Lack of information on campus paths;

Having not defined place as a parking.

By the help of inversing sentences above (systematic procedure of entrance, information on campus paths and defined place as a parking) the negative criteria was determined for evaluating the ideas.

Therefore, the Design section focused on solving the important problems at the main gate area, through each approaches, considering their interactions and interrelations with the procedure of attending the campus.

The free Ideas derived from brain storming were evaluated by considering harmonies and percentage of gaining negative criteria, so a system developed with the following characteristics presented in Table 1.

Characteristics of the system	To automatically control people attending the campus;
	To consider 1 or 2 security guards in an ergo-safe kiosk to check the controlling process indirectly.
	To issue temporary cards to the people excluding students, professors and personnel under the supervision of university's guard.
	To specify a parking place for vehicles;
	To determine a pollution-free transport system like bike to facilitate reaching certain places on the campus.
	Providing required information for people attending the University about paths, special events, conferences and …

Table 1: Characteristics of the system

In order to generate a system with above characteristics, the proceeding products and services were needed to be designed:

Products:

Kiosk for 1 or 2 guards;

Information stand and station;

Bike-Park

Services:

Procedure of issuing temporary cards;

Providing bikes to use on the campus

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