

# Design as a Tool in Prioritizing Domestic Problems

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## **Abstract**

Developing countries face a group of socioeconomic problems which need new creative designed solutions. A holistic approach would be ideal. However, the governments' financial capabilities disallow such an approach and problems are arranged in a hierarchy that follows a top - bottom approach. Prioritizing socioeconomic problems following a bottom -top scenario is possible based on what the younger generations perceive as the most pressing problems that need to be prioritized.

The paper implements a methodology of statistically analyzing design problems that were freely determined and researched by design students as the most pressing from their perspective.

*Keywords:* Design tool, Domestic Problems, Design Education, Design and Society.

## **1. Introduction**

The importance of design for recognizing domestic problems is felt in when the design is woven with the needs of individuals and the community equally, in order to raise awareness of critical issues. The way of doing design in its local context represents alternative paths to social and community groups that can, in fact, bring attention towards developing social systems such as education, health care, environment and social security. Frequently, the designer's role will be changed to "discover" the existence of problems that no one has suspected before. Papanek (1985) argues that designers need to ask themselves the following: "Am I on the side of the social wellbeing, or will the object that I design be an addition to the catalogue of unnecessary fetish objects?" In the context of domestic issues, finding the final solution for a problem is based on defining it to mainly reach a solution.

Manzini (2005) identifies the role of design in the social and local context as a logical course of

action which is based on creating the brief “understanding and framing the problem”; understanding the problem from the perspective as well as expectations of the collective. This means that designers act as “operators” who work within a complex network of actors and constraints, as the aim of design is not only a mere understanding of problems, but it also works on improving the situations into better ones (Simon, 1972).

Nowadays, the focus on major public problems, facing local communities is needed to improve the well-being of its individuals. Design, then, is one of the few areas that can be transformed at the local level to eliminate them. Donald Schön (1983) calls this approach of inquiry “reflective practice”. Advocating for design as a tool of community support is seen as a valuable skill to create usable and sustainable solutions. However, “Many communities and organizations maintain the view that professional expertise of any kind is unhelpful”. (Howard, 2005)

To realize the potential of design in solving society’s problem, it is important to arrange these problems hierarchically prioritizing them, taking into consideration a range of physical, social, economic and environmental factors. In the light of the vast array of problems, the aspect of problem-solving behavior is more than just following technical rules to answer questions such as: “what is a good product?” and how do we create “good” products? By posing such questions, designers need to have individual potentials such as experience of observing the problem or priorities reinforced by the individual’s education, abilities, and aptitudes. The process of defining public problems is completely different than the product creation process. This is due to the human satisfaction factors that are becoming a must to ensure what they want, when they want it and how they would want it.

In doing so, on the one hand approaches that are primarily product oriented are mainly technically articulated; while on the other hand, perspectives are reflected in the process by individual experience that arises from the ability to observe, so a hierarchy of user real needs can be discovered. The new skill then is empathizing with society’s deepest levels of expression highlighted in the design. That is why, “By accessing people’s feelings, dream and imaginations, we can establish resonance with them” (Elizabeth & Sanders, 2002).

The achievement of community’s well-being is depending on sustainable development to all that fulfill different aspirations for a better life. This raises the questions: who can observe the needs and thoughts of people from different perspectives and how? The challenge ahead for community’s problems is to create the tools needed to arrange people’s needs prioritizing the ultimate benefit.

Egypt, like many developing countries, is under the effect of a group of socioeconomic problems that

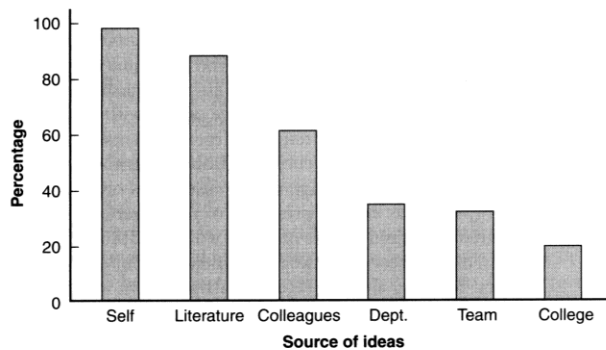
need new creative design solutions. A holistic approach by which all the problems are tackled simultaneously would be ideal. However, it is always beyond the governments' financial capabilities to follow such an approach and therefore decision makers resort to prioritizing the list of needs by arranging the problems in a hierarchy. A major concern here is how this hierarchy is defined. The decisions, made by the parties involved in most cases, follow a top - bottom approach. However, the society is not consulted on which socioeconomic problem should receive the most attention and which one to follow. Since design can offer a lot of solutions to many problems in the developing countries, this paper argues that prioritizing socioeconomic problems should follow a bottom- top scenario based on what the younger designers observe and perceive as the most pressing problems that need to be prioritized and solved in the near and medium term.

## **2. Data Collection**

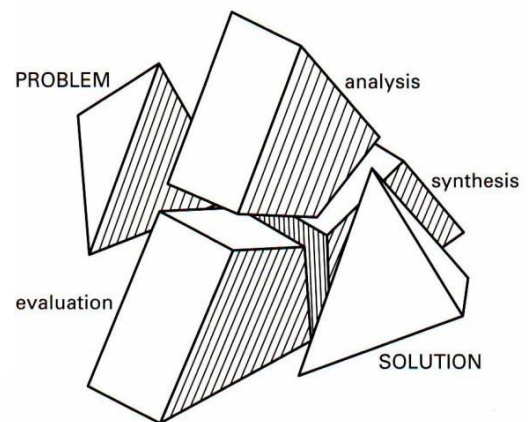
In an Egyptian private university, a 10-semester program is offered for Applied Arts students. Students submit their work through a seminar that is intended to develop the students' abilities to investigate a specific design topic of interest. The course is offered in the 7th semester as a prerequisite to their 8th semester BA thesis. Students have to choose a problem that can be solved through design. The choice is left totally up to them and according to their perspective of priorities. The course trains the student to develop a precise and applicable design research question and to perform the necessary academic literature review related to their thesis prior to moving on to doing their BA project in the following semester. Students concluding the Seminar are able to understand what a design research question is and how it is viewed as a specific problem that needs to be solved by means of media, graphic or product design. Furthermore, the students are able to survey, analyze and paraphrase scientific literature related to their defined design problem. They evaluate the scientific literature surveyed according to relevance and importance to the research question in hand in order for them to produce a coherent and balanced literature review that covers analysis of the factors affecting and influencing the design problem in hand and previous solutions (synthesis) that were produced by others, mainly other cultures, to solve a similar problem. By the end of the 8th semester, students submit their BA projects which are judged and graded by a joint (national and international) committee including university professors, professionals in the field and decision makers. The remaining fifth year is dedicated to advanced design studies that allow students to carry on with a Master degree in Europe.

Students conducting their Seminar course freely determine and research what they see as the most

important problem that should be solved by design. According to Beins, self- chosen ideas for research in Order of frequency of Occurrence score above 95%. He explains that “people have more interest in their own ideas, so they are more likely to invest time and resources in studying those ideas.” (Beins, 2009; and Bernard, 2006) [fig 1]. The students are allowed, if they wish, to carry on with the same design problem for their Bachelor Project the following semester, or they can opt for a new topic. The seminar covers the analysis and the BA project covers the synthesis and evaluation aspects of the Analysis- Synthesis-Evaluation cycle of the design process (Lawson, 2006) [fig 2]. However, at the beginning of the course and prior to their selection of topic, the students are made aware of time, money, and culture constraints. The topics chosen should be doable in the time frame of the university semester: 12 weeks. Budget constraints are not an issue for the analysis phase of the project, yet if the student wishes to continue into the implementation phase for the BA, then s/he is alerted to the fact that financial costs is an issue. The third constraint is culture in which some topics like intimate gender issues become a taboo in some population groups. For example male students interviewing female participants in very conservative Bedouin society; in this case in particular female students are more likely to embrace such a topic.



**Fig 1 Sources for Research Topics and Ideas (after Bein)**



**Fig 2 The Design Process (after Lawson)**

This design program attracts students at the average age of 18 years old, and mostly belong to the A class segment of the Egyptian society due to the costs of tuition in the university in general. Graduates of the Program are most likely to occupy pivotal posts in the medium-long future due to their better education, family ties, and running family businesses.

The data in this paper are 535 problems that have been collected and discussed by these Egyptian design students over a five year period spanning from 2010-2014.

The students are divided according to their specialty. 206 (38.5%) specialized in Product Design (PD); 185(34.5%) are specialized in Media Design (MD); and 144 (27%) are specialized in Graphic design (GD). The majority of the students are females. The males represent only 12.88% of the sample. Unfortunately, it is not clear why females tend to register more in comparison to males in this program.

### 3. Results

#### Structuring of the Data

For clear categorization of data, two simultaneous grouping were made in terms of students and terms of the selected problems. First, the students were grouped according to the year of admission, gender, and specialty (MD, GD, and PD). Second, the topics of choice were categorized into as: social, economic, industrial, political, behavioral, environmental, religious, health-related, and gender problems. Since design problems are multi-disciplinary in nature, topics may be ordered under several categories. Industry, although a component of the economy, was stated individually to be able to differentiate between design problems that target privately owned businesses or industries that affect the economy of the nation. For example rebranding a confectionary business is noted under industrial problems while rebranding touristic areas in Egypt comes under the more general economy category.

Similarly, political behavioral, environmental, religious, health, and gender problems are all social topics, however the differentiation was needed to highlight the sub-categories.

A column for the target group was added. The target group are the ones towards whom the solution is directed and will be the main beneficiaries of the proposed solution when applied. Target groups are divided into females, Youth, Children, handicapped, and general beneficiary, according to the students' vision on both the problem and the solution proposed through the design.

#### Data Analysis

The majority of issues chosen in the three specialties were social. They occurred 420 times. It is worth noting that 132 out of the 144 MD students; 147 students out of 185 GD students and 140 out of the 209 PD students have selected the social problems over other issues. Industry was chosen 119 times by the PD students. The second highest chosen issues are the behavioral 367 topics while the industrial problems come in the third position with 274 related topics [fig 3].

As per the chosen target groups, 75.70% targeted a general category (for instance storage for outdoors, raising animal rights awareness, and redesigning street signs; 10.65% targeted children related problems (for instance, designing an animated dictionary, redesigning the classroom environment, and media's bad effect on children); 5.80% thought of the handicapped (for instance, mobility and walking disability, development of above-knee prosthetic limbs to enhance the patient's life quality, and education for the visually impaired); 5.05% were youth related topics (for instance, media design answers for the problem of Internet addiction among teenagers and adolescents, adolescents perception and use of public parks, and overexposure to western media and its effects on the culture identity of Egyptian adolescents, and how animation can illustrate the issue); and 2.80% targeted female related problems (for instance, how does the lack of sex education affect female teenagers in the Egyptian society and how can media develop this matter, beauty pressure and teenage girls self-esteem, and Gender inequality in Egypt and its effects on the social aspects and lifestyle), [Fig 4].

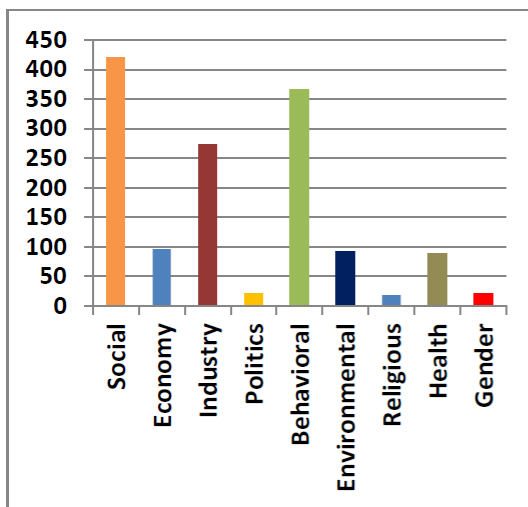


Fig 3 Frequency Occurrence of Topics as Chosen by Students

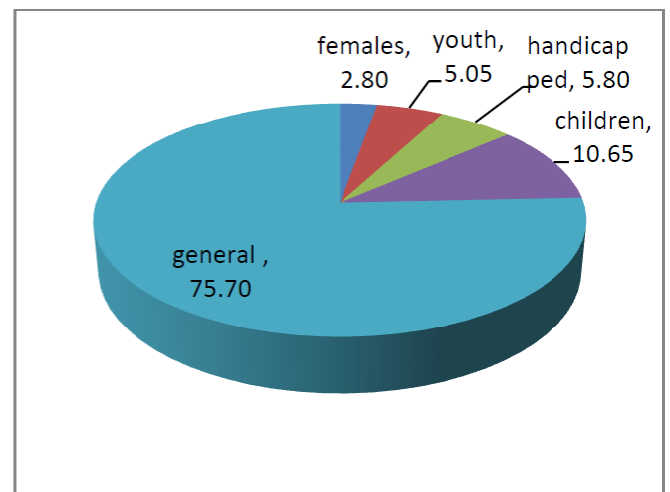


Fig 4 Percentage of Target Groups

In spite of the fact that 88% of the students are females, female related topics only scored 2.80% this shows that students were not biased towards their gender rather they prioritized more general target groups.

The handicapped also scored a percentage though low, but it was higher than the ones dedicated to both youth and female problems which shows that the students do realize their existence, needs, and role in life.

Topics that discussed joint socioeconomic, industrial and behavioral problems were only 28 and fall under 10 main areas: transportation and traffic, mass media and advertising, Egyptian Identity and brands, smoking, crafts and local products, water and energy scarcity and consumption, pollution and garbage collection and recycling, tourism, psychological wellbeing, and public schools.

## 4. Conclusion

Statistical analysis of the problems suggested by senior Egyptian design students demonstrates that they were able to comprehend and analyze problems that are solvable by creative design solutions. In spite of the fact that the student sample was limited and did not represent the Egyptian youth as a whole, their choice of issues to be solved has reflected an inclination towards problems of importance to the society in general. The list of priorities concluded by this research can help decision makers as well as companies who envision Corporate Social Responsibilities (CSR) to prioritize the problems in ascending order from bottom to top. The drawback however regarding the results is that they are derived from an A class group of participants. The authors recommend that a similar study would be conducted at a National university with a similar program in design where tuition is waived, and mostly with a different social level of students, in order to be able to compare the results.

Furthermore, a second stage of this research should be conducted in which the student topics and research be turned into more detailed keywords in order to be able to produce a more precise list of problems according to their importance from the point of view of young designers.

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