

3 Findings from the Design Workshop

3.1 Outline of the Workshop

The workshop is designed to produce the effective results in the following areas.

- (1) The product concept introduced was designed to cover not only the product concept derived from consumer needs, but the design concept including the development concept derived from the supplier's needs, and to create the one that can be agreed by related departments involved in the product development process. Then, in the final process, the produce concept focusing on consumer appeal, including product features and proposed use, was created.
- (2) To clearly define the target consumer, participants were asked to draw an image map representing the target consumer. They also collected articles and ads from magazines that depicted consumer lifestyles, including everyday products and fashions and were encourage to share a general image of a product to be developed. A product chart map was constructed by participants for each product selected in order to gain understanding of how the existing product was deployed and help them obtain an overall picture of the product.
- (3) To help participants to understand as to how industrial design works in the entire process from planning to production and marketing, the relationship between design and each process of design, mold making, parts making and volume production was explained. Also, as designers generally lack experience in actual production and does not have sufficient knowledge on raw materials (selection criteria and characteristics in relation to design), mold design and molding, selection of parts, and production technology, the workshop consisted of product planners and production engineers to encourage effective implementation of the design process in the corporate environment.
- (4) Design was expressed using sketches and three-dimensional models made of foam urethane to allow visual confirmation. This was well received by participants representing companies.
- (5) Design drawings, required for creation of a design model and actual production, were made using the AUTO-CAD system. However, companies did not have basic drawings and students did not have good drafting capability, so that quality of design drawings was far from satisfactory.

3.2 Present Condition of Design Development

In Jordan, no electric home appliance company has its own design organization and few product design work is carried out internally. Most companies assemble parts purchased from overseas (such as Taiwan) or made from molds that are foreign made.

Design work is limited to product color selection, POP and other subordinate services. Products are highly standardized and subject to strict cost control. No company hire an in-house designer and product design is determined as the owner or the manager purchases a mold. They do not concern about copy products and are generally content with the present business practice.

Most companies have their own brands but are losing market share to cheap products from China. Consumers seem to choose Chinese products which are constantly renewed in design, while they also tend to look for price rather than product quality. In fact, products made in Jordan are received by consumers in Egypt with a lower brand image than Chinese products. It is important to develop and market new products all the time, which help improve technology and quality, while spurring demand. If Jordanian companies do not make any effort to improve their competitiveness, they will be totally defeated by Chinese products. They must improve their brand images by developing original products.

Most companies do not concern about design quality in terms of appearance and do not have a system to support systematic design management. To manufacture products according to design, a scientific method to control quality of parts affecting appearance in strict accordance with drawings, coloring and surface treatment, i.e., use of Munsell color system or panton, parameters and symbols. This improves fitting of parts and minimizes color variation between lots, leading to better product appearance. The workshop demonstrated importance of systematic design management and explained actual management methods and techniques to company staff and students who would become designers.

In the country where no industrial designer can be found, it is difficult to expect public understanding of the design process and know-how. On the other hand, any participants showed strong interest in design and its value. To promote design-centric product development, companies that supply products must understand its merit. At the same time, it is important to educate designers. The current design education at universities emphasizes creativity (development of ideas) but does not teach design and production

techniques as well as cost awareness. Also, basic industrial design skills, e.g., sketching, shaping and drafting, are generally at low levels.

3.3 Overall Evaluation and Major Issues Related to Design Promotion

(1) Designer education

Design sketches drawn by students of Yarmouk University have not reached the levels required for industrial design, in terms of conceptual development and expression, and sketching and formative techniques. Design must be expressed in an attractive shape and color, as much as it must provide a function useful for consumers. Clearly, the current curriculum should be modified to emphasize basic design skills, including sketching and shaping, in order to educate designers who can meet the above requirements. Furthermore, product design requires engineering knowledge. The workshop provided an opportunity for design students to expose themselves to engineering aspects of design by working with company workers. To promote industrial design, such opportunity must be offered more widely. Design and technical skills improve through experience in actual product development. Efforts should be made to provide designers with hands-on experience in product development.

(2) Use of design resources

The major issue related to industrial design in the country, as pointed out earlier, is that there is no industrial designer. Design students do not closely associate with private companies. Business managers do not feel the need for use of an industrial designer for product development. For most companies, product development means the purchase of molds and parts from overseas, which meet their product images. Many are content with manufacture of products with imitated designs. Similarly, consumers are primarily concerned about price, rather than design or quality. Nevertheless, it does not necessarily mean that consumers are satisfied with products currently available on the market, but they are accustomed to the situation. By offering better design and quality, local manufacturers can help consumers to become awareness of product quality and can obtain export competitiveness in other Arab countries.

(3) Design education and design awareness of business managers as the key to successful utilization of design as management or social resources

1) Designer education

Design students lack basic design skills, especially sketching and formative expression and have not reached the level to draw design details through rendering

(final sketch) and final mock-up molding. While it is urgent to teach basic graphical representation skills, the technique to translate design details into drawings, which involve the use of notations and symbols representing color, surface treatment and other instructions, is also critical in making mockups. Drawings are a major tool to transform design concept to detailed design and a mold that represents a mirror image of a designed product. Thus, the present curriculum for design education should be modified to emphasize these basic skills.

Designers primarily communicate with their clients, especially business managers and sales force (such as buyers) through the product concept and the design mockup, which must be persuasive enough for clients to find the designed product to be marketable. Also, commercial success (profitability) of most products is highly dependent upon R&D and production capabilities of their manufacturers, especially cost management, and designers must have some knowledge on these critical factors. Business manager often criticize that designers create an unrealistic product that is technically or commercially infeasible to make or that neglects cost constraint. The situation can be avoided by the designer's efforts to learn about the industry he or she works with. The workshop emphasized the concept of realistic and commercially viable design, which needs to be taught in a systematic way because it forms the basis of design promotion.

2) Design awareness of business managers

Actual design promotion activities are usually targeted to designers, business managers are in a position to make an important decision, i.e., to adopt design as a critical management resource. As the first step, they should visit countries that import their products and understand that mere imitation has no future, while original design and product quality (workmanship) can be major strengths for export promotion.

In conclusion, industrial design should be promoted through concerted efforts of companies and designers, and at this stage, Japan should provide continued assistance for educational institutions and industries to introduce industrial design and its concept into their business processes.

3.4 Home Appliance Design Trends in the Middle East Market

Generally, design trends in the region, with some variation among areas and products, are following those in Europe, Japan and Korea (which product design follows Japanese design), while the traditional design (characterized by gold color) is mostly disappearing.

Thus, the market seems to accept global designs.

This is evidenced in individual products. Audio and video equipment is mostly designed using black and silver colors, clearly based on Japanese products such as Aiwa and Sony. Some products use traditional gold lines and ornaments on silver ground, but they account for small portions of storefront display. This seems to reflect the fact that younger consumers prefer a modern, high-tech product image to traditional, Arabic design characterized by gold decoration.

As for washing machines, vacuum cleaners and refrigerators, Japanese and Korean products with soft curvature are most popular, followed by Italian products featuring linear designs. Some products use a thin gold color on the control panel. They are clearly old models and shipped to the market because they can still be sold to consumers with conservative taste. Besides old models, new models of contemporary design are displayed.

Electric fans are primarily supplied by Taiwanese and local manufacturers, who adopt gaudy designs using the Arabic gold decoration. No Japanese and Korean products are seen. These designs are similar to those developed by Japanese manufacturers thirty years ago for the Middle East market and seem to be inherited by various manufacturers.

Telephones are mostly white or dark gray-based. Darker colors seem to be preferred, a distinctively different taste compared to the U.S., Europe and Japan. They are also popular in tropical regions including South Asia, because they suggest strength and energy, while neutral tints are perceived as weak in the distinctive climate pattern and other local conditions. At present, Chinese products use traditional Arabic designs based on dark colors and gold linings.

One of the basic suggestions for home appliance design is the use of Arabic letters on the control panel and other indications (excepting numbers), which can be effective in promoting home appliance products in twenty-two countries in the region, which use the same language.

