

## Recycled Products in the Realm of Furniture and Interior Design in Kuwait

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#### Abstract:

The success of furniture and interior design depends on important elements of shape, function and durability. With the emergence of environmental problems and the pressing need to adapt materials to climate change, a new field of design dealing with recyclable products has developed. This research deals with the level of success of recycled products in the realm of furniture and interior design in Kuwait. The study focuses on measuring the public's awareness and practice of recycling in Kuwait, then moves on to analyze whether recycled designs have succeeded to find a place within the lifestyle of Kuwaiti society, taking into account both form and function necessities for achieving a good design. In this regard, the main research question is "To what extent have recycled products in the realm of furniture and interior design managed to succeed in Kuwait?" Findings regarding Kuwaiti society and recycling show several results: most members of the community stated that they had a high knowledge of environmental issues yet seldom actually practiced recycling; community members are against a stronger legal framework for environmental protection; higher education assists with knowledge of environmental issues but not necessarily better recycling practice. The findings from the experiences of recycled designs display that the consideration to the function aspect of the design was not strong. In this regard, the sector is developing with the aim of decoration only and not the essential target of a better environment. The research ends with recommendations to policy-makers and designers on developing recyclable designs that suit the society in Kuwait (in terms of form) and serve the function of ameliorating environmental threats.

#### Keywords:

*Waste Separation, Recycling, Public's Awareness, Form, Function.*

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## 1. Introduction

Citizens in developed countries have, to a large extent, achieved a high level of awareness when it comes to environmental issues. This is due to several factors, including community awareness, investment and solid legal frameworks. Separating waste at home became an easy daily habit for citizens. Also, recycled products have become common and an integrated component within the field of design. The mainstreaming of such products in daily consumption meant that their development in terms of aesthetics and function has developed to a large extent, and is constantly on the rise.

### 1.1. Good design

There are essentially two decisions that must be taken into account when it comes to design; functionality and aesthetics. The first is concerned with making things work better – making them more comfortable, efficient, safe and economical. While the second is concerned with how designs

will look.

There is difficulty in attempting to make improvements in appearance to an existing product without making fundamental changes in form and construction. In this regard, to design a chair that is successful both functionally and aesthetically requires that the job is done from the beginning with the understanding that the two basics are inseparable.

Pure functionalist means, at base, that being functional will not guarantee that a design will be good, but that being nonfunctional will certainly make it bad. A chair can be comfortable and still looks bad, but if it is not comfortable it cannot possibly be a good design, no matter how tasteful or attractive its looks may be. (Friedmann, 1982).

A Good Design means that something is more permanent and fundamental than merely being tasteful. It refers to qualities that can be recognized in an object whether it is in style or not, popular or not.

## 1.2. Recycling

The shortest literary definition for recycling is “to adapt to a new use”, “to alter” (Merriam-Webster, 2018). The United States Environmental Protection Agency meanwhile defines recycling as “the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products” (EPA, 2018).

There are many important advantages of recycling processes such as: minimizing pollution, protecting the environment, minimizing global warming, conserving natural resources and ensuring a sustainable use of resources (Van Ewijk, 2017). According to Conserve Energy Future, there are also challenges that accompany recycling. The first, and most frequently cited, is that recycling is not always cost-effective.

## 1.3. Design, Recycling and Kuwait

Over the past thirty years, the field of design has undergone fundamental changes in response to environment issues and climate change. New shapes and forms have been produced that challenge the consumer’s normalized perception of form. In Kuwait however, the issue of environmental degradation and recycling is still minuscule, with minimal impact on the field of design.

### PURPOSE OF THE STUDY

This study deals with the issue of the level of success of recycled products in the realm of furniture and interior design in Kuwait. The study focuses on measuring the public's awareness in Kuwait of the recycling processes, whether recycled products exist in the realm of furniture design, and if they do exist whether they achieve an acceptable function and form in the lifestyle of Kuwaiti society. In this regard, the main research question is “*To what extent have recycled products in the realm of furniture and interior design managed to succeed in Kuwait?*”

Based on this main question, several sub-questions ensue:

- What are best practices of recycled designs in developed countries?
- What is the state of Kuwaiti policy makers and society vis-à-vis recycling both in terms of knowledge and practice?
- What are the status and credibility of recycled designs in Kuwait, especially in the realm of furniture?
- Are recycled designs in Kuwait fulfilling the requirements of Good Design in terms of form and function?

### METHODOLOGY

The study relied on a descriptive and analytical

approach to reach its findings. It used different tools of data-gathering, mostly based on first-hand information.

The tools used for data gathering are:

- Desk research on general information on recycling in Kuwait and other countries.
- Annotated photographs of some of the recycled interior and furniture products of the visited areas in Kuwait.
- Interviews with specialists in recycling processes of some institutions in Kuwait. Enquiries were made on the description of the work, types of materials for recycling and the percentages of profit from recycled products. The interviews also focused on the relationship between Kuwaiti society and the companies working on recycling.
- Structured questionnaires with 700 Kuwaiti citizen from different segments of society to analyze the extent of their knowledge and practice of recycling. It was important to analyze a wide range of categories and diverse groups of society. Analysis was done according to different factors. In specific, the relationship with recycling was measured along three categories:

1. Difference in occupation: Employee, student and housewife

2. The level of education: Intermediate education, Bachelor and Higher Education

3. Age levels: four categories starting with 18 and ending with above 45 years’ old

In relation to the questions asked to the pool of respondents, they were as follows:

- The extent of a person’s perceived knowledge of environmental issues
- Whether the person conducts waste splitting at home
- Knowledge of recycling in Kuwait
- Whether they extract any useful items from waste at home
- Whether they own recycled products
- Whether they agree to the government introducing a fine and stronger legislation for not splitting-waste
- Whether they are interested to be engaged in awareness-raising within their society on recycling and environmental issues.

The findings of the research are divided according to three sections; the first outlines examples in other countries of recycled designs. The second section illustrates the results of the research in relation to Kuwaiti society’s relationship with recycling. While the third section tackles the question of recycling and design in Kuwait.

## 2. Recycling and sustainable design internationally

Many developed countries have achieved successful methods of producing useful outputs and achieving the purpose of recycling that affects the environment positively. Such designers have paid attention to the balance required to achieve a good design in relation to both form and function, and have applied this to sustainable products. Below are a few



Fig. 1- Hung-Pin Hsueh driftwood structure system, Cypress, Taiwan.

### 2.3. Pallets:

about 80% of global trade is transported on pallets and billions of them are in circulation within various systems. The EPAL-pallet (0.96 square meter, 1200x800x144 millimeter) the standardized European pallet and the standard US pallet size of 48x40 inches. The current obsession with repurposed pallets is because of their standardized size, stability and low cost. But even more important is the pallet's aura, its symbolic meaning of unpretentious appearance. (Fig. 2) shows a building located on Gounari Street in Glyfada, a suburb in Athens, which was left structurally unfinished over a long period of time. The architects' interior was to give the existing structure a new modern identity, using natural and environmentally friendly materials such as wood and waxed concrete. Pallets were selected as the main building material because they are both low-budget and eco-friendly, with low maintenance costs.

examples outlining this relationship:

2.1. Taiwan Cypress Driftwood: Hung-Pin Hsueh presented a system for using Taiwan Cypress driftwood as an architectural building material. (Fig.1) Hsueh proposed that by designing a structure that allows utilization of drift wood pieces, the need to log natural forest for architecture will be greatly reduced. (Schleifer, 2009).



Fig. 2- Pallets as a main building material, KLab architects 2015, Glyfada, Greece.

### 2.4. Brother in Benches:

To contribute to the community, the collaboration designed and constructed flexible benches with the intention of encouraging people to interact with each other. (Fig. 3)



Fig. 3- Designed by artist r1. Sam Sithole 2014, Johannesburg, South Africa.

### 2.5. The Pop-up office:

Using modular units that can be combined in

different ways, this project has been built from reclaimed shipping pallet boards and their frames.

A workspace that once used as a transportation base, now totally transformed to build a flexible

room structure. (Uffelen, 2017).



Fig. 4- Designed by Dubbeldam Architecture, 2013, Toronto, Canada.

**2.6. Patchwork:**

London based Norwegian designer and illustrator Amy Hunting is the creator of Patchwork- a series of furniture made from recycled wood scraps, collected from factories in Denmark. The collection (Fig. 5) is Consistingof chairs, lamps and storage units. (Schleifer, 2009).

**2.7. Lapel:**

Lapel is a standard chair produced made by folding 100% recycled plastic. This manipulation of material allows assembly in minutes without the

use of glues or screws. In conjunction with a tool-less assembly, not only does it retrieve waste material from land fill, the designed outcome can be clearly dismantled re-recycled via domestic infrastructure. Inspired by origami folding technique. Lapel is a sculpturally unique chair with outstanding environmental credentials. Lapel is suitable for both indoor and outdoor use, and can hold weight up to 100 kg. (Fig. 6) (Klanten, Ehmann, and others. 2009).



Fig. 5- Recycled wood, Amy Hunting, London, United Kingdom



Fig. 6- Recycling, easy dismantling, Stuart Mcfarlane, Fitzroy, Australia.

**3. The state of recycling in Kuwait**

**3.1. Legal framework and existing companies**

According to Al Fakhri Center for Research and Development, the amount of investment in the field of waste recycling in general, and solid in particular, in Arab countries remains very limited and modest. Overall, investment does not exceed 200 million dollars (Al Fakhri Center, 2001). In this regard, most of waste recycling projects in Gulf countries are based on individual attempts and not state-driven policies.

Kuwait has taken a few steps in regards to the legal framework surrounding waste disposal where the Public Authority of Environment in Kuwait passed Law number 99 in 2015 which “punishes by fines whoever discards garbage or waste in places not designated for the purpose, and likewise

in many branches to protect the environment” (The Public Authority of Environment).

In this regard, there are a few companies established in recent years to work on efficient waste management and recycling in Kuwait, and across the region. One of the largest amongst them is United Waste Management Co., a closed shareholding company, established in the state of Kuwait in 2011. The company’s website description states that:

*“We at United Waste Management are highly aware of the growing demand for efficient waste management and recycling in the MENA region. In Kuwait alone 3500 tons of municipal waste is produced daily. The collective disposal of this untapped resource in scarce landfill space leads to emission of greenhouses gases and environmental decay. Recognizing the sensitivities involved and commitment to the Go Green principal, our core existence centralizes on environment management*



techniques involving waste management, material segregation and effective re- utilization of wastes, such as waste water management, municipal solid wastes and re-cycling” (United Waste Management Website, 2018).

The authors of this research interviewed representatives from the company who stated that they consider themselves entrepreneurs in Kuwait when it comes to this field. They added that there not yet enough awareness from the society when it comes to recycling. Specifically, the interview showed their high dissatisfaction with the awareness of Kuwaiti society on the importance of waste splitting for the benefit of the environment. This comment was repeated by other companies

that were interviewed.

### 3.2. Kuwaiti Society and Recycling Perceptions and Practices

The questionnaire distributed by the authors aimed to capture Kuwaiti society’s perceptions and practices vis-à-vis recycling. Different segments of society, age groups and education categories had varying results (see methodology for exact questions). The results of the questionnaire shall be tackled along the lines of the three lines of analysis.

#### 3.2.1. Relationship between segments of societies (employee, student and housewife) and recycling

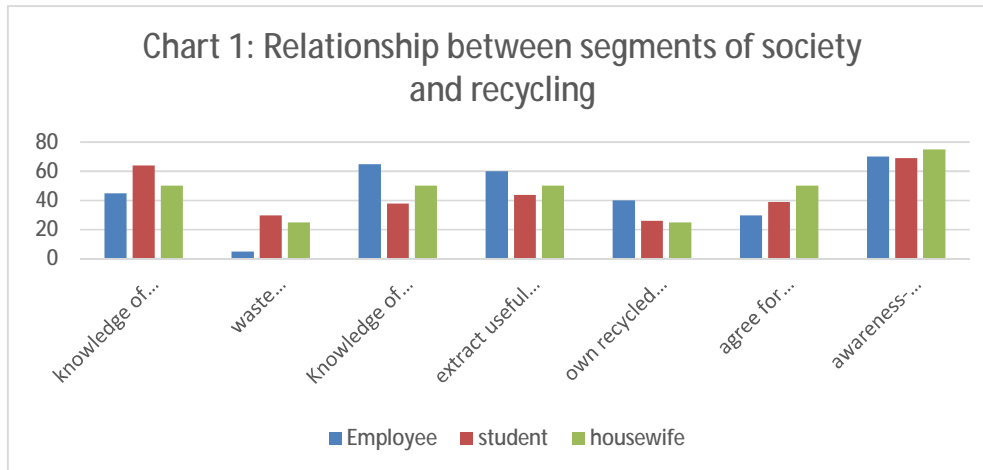


Chart 1

Chart 1 illustrates that more than 60% of student’s state that they are aware of environmental issues, while employees’ perceived general knowledge is at 50% and housewives 45%. Perceived knowledge of recycling is averaged at 50% for the three segments. Practically however, less than 30% of students and employees split waste and a mere 5% of housewives do. Although 40-60% of the segments agreed that many items in

the home’s waste could be useful to reuse. Furthermore, more than 60% of the three segments do not like to buy or possess a recycled product, and 70% completely disagreed establishing a fine for not separating the waste in homes. However, over 60% were interested to engage in awareness-raising in Kuwaiti society about the environment.

#### 3.2.2. Relationship between age groups and recycling

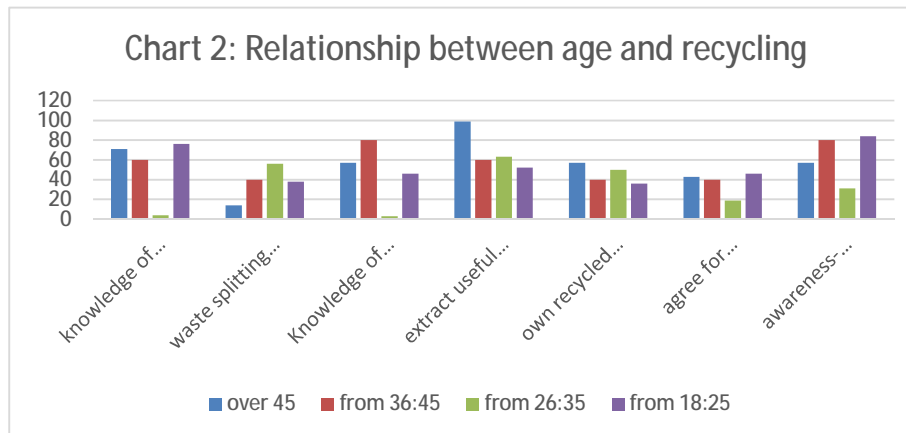


Chart 2



Chart 2 illustrates that 98% of people over 45 years old reuse useful things from their home's waste but the less ages do not. Most of the respondents do not like to buy or poses recycled products but on the other hand they are willing to help instruct the community to understand the importance of separating and recycling wastes. Furthermore, more than 70% do not agree of establishing a fine for not separating the waste in homes. What is remarkable in this category is that there is a general perception that the younger generations are more aware about the adverse effects of climate change and environment degradation.

However, the correlation between age and recycling in this category shows that older generations are more likely to practice recycling than the young generation. The accurate reasoning for this is beyond the scope of this research but one explanation could be the prevalence of consumerist behavior within Kuwaiti society in recent years, especially amongst the younger generation.

**3.2.3. Relationship between education level (Medium, Bachelor and Graduate) and recycling**

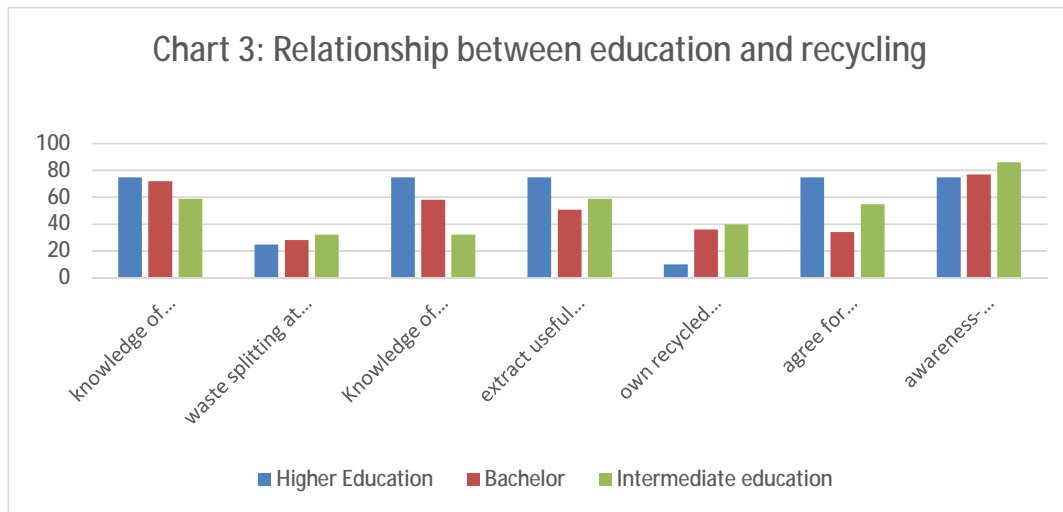


Chart 3

Chart 3 illustrates that the perceived knowledge of environmental issues and recycling are positively correlated with the level of education. Therefore, the category with the highest score of over 70% knowledge of environmental issues is the one with the highest degree. In terms of practice though, it is interestingly reversed where the category with the lower degree engage more in both waste splitting and owning recycled products than those with higher degrees. Also, those with a lower degree are more eager to engage in community awareness raising than those with a higher degree.

**4. Practical applications for recycling products within the field of design in Kuwait**

Within the desk research, interviews and questionnaires, the authors of the research sought to find practitioners of design working with recycling. Insufficient were found and viewed as examples of practicing recycled experiences in educational institutions in Kuwait. This displays how scarce the topic is and not yet spread out in Kuwait as is the case with other countries. The first experience outlines the work of Al Yousra

intermediate school and the second the work of the Interior Design Department within the Faculty of Basic Education in Kuwait.

**4.1. Experience of Al Yousra intermediate school**

The researchers visited the Décor Department in Al Yousra intermediate school. The latter is one of few governmental schools in Kuwait that adopted the recycling issue to produce useful products. Researchers shot some photos within the main gallery of the school which can be found below:



Fig. 7- Used recycled wood pieces and pasted the images on them



Fig. 8-(left) The table was made of neglected wood, decorated with a pinch of glass for protection



Fig. 9-(right) Reusing of a vegetable pallet

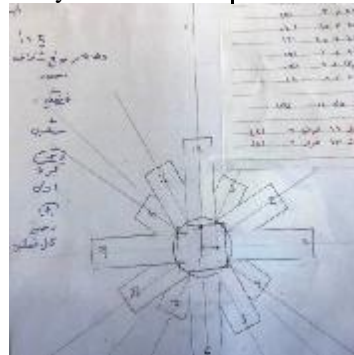
#### 4.2. Experience of The Interior Design Department, Faculty of Basic Education

One of the authors of this report, Professor Diana Kamel, had previously engaged with her students on the issue of recycling. They made an

experiment to recycle used pallets working with different designs to reach a useful product. The process of the operation has been documented at the department's carpentry workshop with photos and displayed below: (Fig. 10)



Pallet's original place



B. Design according to the Pallet's size



C. Cleaning and finishing pallets



D. Design 1



Design 2



Design 3

Fig. 10-The process of different recycle design using pallets

#### CONCLUSIONS

This research has shown that in several developed countries, the principle of recycling waste and using materials to obtain new products has been established. The results of which delivered serious products that meet the functional and aesthetic purposes to a large extent. The user has also

conformed to regularly getting exposed to such products, reducing the stringent need for specific shapes.

In Kuwait, recycling and environmental issues are not a top priority for the society. There is a weak legal framework enforcing recycling and there is low investment in the issue. It is clear after



visiting some of the waste recycling companies in Kuwait, that they reached a certain individual experiments level, but their main problem is the lack of cooperation from the society.

Findings regarding the Kuwaiti society and recycling show several results. First, there is a strong discrepancy between perceived knowledge of the issue and practice. While most members of the community stated that they had a high knowledge of environmental issues, seldom actually practiced recycling, despite having trash cans provided for this purpose. Second, most members of the community are against a stronger legal framework and repercussions towards violating environmental standards. This displays a low commitment to the issue. Third, younger generations are worse off vis-à-vis practicing recycling than older citizens. This is distressing, especially given the pertinence of the issue of climate change in the future. A positive indicator though is that they had high willingness to engage in awareness-raising in their community on environmental issues. Fourth, higher education assists with knowledge of environmental issues but not necessarily better recycling practice.

In relation to application of recycling in the design field, the research findings display that Kuwaiti society are not in favor of owning recycled products. The reasoning for this being low commitment to recycling in general, but also the low acceptability of such products in terms of design form and shape.

The findings from the two experiences display that the consideration to the function aspect of the design was not strong. In other words, the aim of these products was not to address the environmental issues within the society but rather superficially copy the forms of recycled products from other countries without addressing the functions and aesthetic taste. The risk is that the sector develops with an aim of decoration purposes only and neither reach the real target of a better environment nor a design amiable to Arab taste. Without a real commitment from society to environmental care, at best recycled products will be fashionable and at worst non-existent. Designers in Kuwait thus need to make sure their recycled products address both environmental issues and local taste.

### Recommendations

As a result of these conclusions, we would like to make the following recommendations to policy-makers and to designers in Kuwait:

#### *For policy-makers*

1. More awareness-raising should take place in Kuwait regarding the importance of waste

separation and recycling. Policy makers should make more of an effort to institutionalize regulations that would be acceptable for citizens yet improve the situation of recycling.

2. There needs to be higher incentives for the private sector to invest in recycling.
3. Education in Kuwait needs to integrate the importance of recycling and preserving the environment within its curriculum. This should not be limited to theoretical knowledge but include practical steps that society should take.
4. There should be more programs involving youth in the importance of recycling.
5. The media should raise awareness on the importance of waste separation and recycling within Kuwait.

#### *For designers*

6. Designers should make sure their recycled products take into account both form and function. They should conduct more research into the functional and aesthetic needs of Kuwaiti society and develop products based on Kuwaiti taste.
7. Information aiming at enhancing recycling products should be clearer in terms of function, form and durability.
8. When designing and distributing recycled products – within the realm of interior and furniture design - it should be possible that the product could be perceived as “less perfect” in some of the basics of design and taste of Kuwaiti society regarding form for the sake of a better environment.
9. It is important not to copy products from abroad that are not derived from the needs of Kuwaiti society.
10. There is a need to increase networking opportunities with important actors working in this field, including from the private sector and foreign designers to exchange know-how and ideas.

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#### Field visits and Interview Subjects

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2. Becarre furniture, accessories and event-styling company. Salmiya, Kuwait.
3. Biatena Recycling Company, Alarfg Group, Kuwait.
4. Gulf Paper Manufacturing Co. k.s.c, Fahaheel, Kuwait.
5. Metal & Manufacturing Company, Kuwait.
6. Omniya PET recycling co. Kuwait.