



APPROACH TOWARDS DESIGN SMALL SPACES USING MULTIFUNCTIONAL FURNITURE: A REVIEW

Id. PRIYA KANDALKAR

Assistant Professor

Department of Interior Design

College of Non-conventional Vocational Courses for Women,

Kolhapur [MS] INDIA

ABSTRACT

In today home furnishing products, there are available many sort of space saving furniture like table and chair is often folded using wide within the market. The first problem we have is the high cost of living in limited space. The main goal of this study was to study the low cost of living in limited space and this study was to create a design for feasible and sustainable multi-functional furniture which could transform a living space based on the need and time of the day. This literature reviewed is a mix of articles and papers about small apartments and low cost housing development, multifunctional furniture and modern furniture. Finally, it could be concluded that Transformable space-saving furniture is an innovative product with plenty of room for future development and an enormous potential metropolitan market. It is important to have furniture with more than one feature to save as much valuable space as possible.

Keywords: Population growth, urban development, small spaces, low cost, furniture, human needs, Space Saving, Flexibility

Introduction

For centuries, furniture is formed for an equivalent purpose. Desks, tables and workbenches provide space for work and dining. Chests, cabinets and cases are built for storage. Sofas, chairs, beds and benches are made for resting. Small apartments are a consequence of the increasing population and concrete housing growth. The marketing prices and therefore the rising urbanization are pushing people into less space. Today, the human needs are an equivalent. How does the shortage of space affect the people living there? Since furniture

Id. PRIYA KANDALKAR

1P a g e

may be a necessity and not a luxury, everybody needs it. Furniture covers about 50 per cent of usual floor space. Hence, to preserve human well-being, living during a small space therefore requires smart and space-saving furniture solutions. Architecture and style moved side by side with social and technological innovations, to market the interaction between users and their home environment. In today home furnishing products, there are available many sort of space saving furniture like table and chair is often folded using wide within the market. Convertible is one among the spaces saving furniture. Convertible may be a piece of furniture which it are often used as both a settee and a bed. this excellent flexibility of sofas convertible into beds have proved of great help those that sleep in small apartment and worried about the accommodation of additional guest for stay over. They will easily be converted into beds at nights and after its purpose served it are often rearranged back to sofa. They are not difficult to be arranged and rearranged as they're flexible and cozy enough to handle.

Statement of problem:

The first problem we have is the high cost of living in limited space. For a long time, furniture and product design has been my research subject, because I want to know how to use them broadly as everyday resources to improve the basic life of humans and provide people with a more comfortable lifestyle.

Objectives

1. To study low cost of living in limited space.
2. To offer more than one function to furniture to save as much valuable space as possible.

Scope:

The aim of this study was to create a design for feasible and sustainable multi-functional furniture which could transform a living space based on the need and time of the day. Dealing with such a complex climate, the elements of which were deprivation, overcrowded living space, and lack of material and financial resources available, required creative working methods to guide the project in the proper direction. Sustainable design of furniture may increase the efficiency of living space usage, while giving people a sense of self-worth to enable them to create the furniture themselves with limited resources available. And as a result, places affected by deprivation will potentially prosper in a better living climate. Apart from the question of high living costs, the scarcity of natural resources and its high price is another concern that needs to be taken into consideration by people today. In underprivileged communities around the world, the concept of feasible, multifunctional furniture could be used in small living spaces. (*Farah Nasser, 2013*)

Methods:

The findings of this article are based on literature review. The literature reviewed is a mix of articles and papers about small apartments and low cost housing development, multifunctional furniture and modern furniture.

Furniture:

Today, most of the furniture is considered a need, not a luxury. Furniture comes in all sorts of shapes and sizes, all depending on the purpose and function. Furniture size and scale is a matter of function and practicality, e.g. a sofa's height and depth can determine how comfortable it is. (*Kristoffer Thogersen, 2017*) Furniture is an essential part of an apartment. It is taking up about 40-50 % of the floor space. (*Waswo, 2013*) There is no longer enough space to carry basic standard sized furniture like a bed, a table and a sofa at the same time because of the growth of smaller apartments. Therefore, the market for intelligent and space-saving furniture solutions is increasing. Findings show that there are some ways to solve the problem of small spaces, but the need for furniture to become more creative to fit small living spaces is still challenging. We use multifunctional furniture, modular furniture as well as specially designed rooms which can be converted into various living spaces. All solutions are planned to save space and increase spatial efficiency.

Multifunctional furniture:

There are several names to multifunctional furniture: multipurpose furniture, space-saving furniture and transformable furniture. The basic idea of multifunctional furniture is that they do more than one thing, as the name suggests.

Modular furniture:

Modular furniture is pre-made or ready-made furniture which can be used depending on the needs and layout of the space. As regards space limitation in flat apartment, modular furniture is very helpful in saving space. We can be used in a number of ways. Together with its value, modular furniture is less costly.

Transformable rooms:

In most of the world's metropolises the average living space of people is becoming smaller and smaller. In addition, high population density leads to many other issues, such as high gap between rich and poor, high energy costs, and house prices. Nowadays these are common

issues in metropolis. One of the options to solve these problems is transformable space saving furniture. The study will help people understand the significance and potential value of furniture saving transformable space in metropolises.

Space Saving Beds:

Space saving bed can be divided into two categories, regular beds and bunk beds. A regular space saving bed might be a shelf; desk; or combined bed and desk, in which the desk portion is capable of being transformed into a bed. Figure shows how the desk mode of the piece, employed for study or working at home, can be transformed into a queen sized bed when the owner wishes to sleep. (*Dhiraj V. Astonkar, Dr.Sanjay M. Kherde,2015*)



Id. PRIYA KANDALKAR

4P a g e

Space Saving Tables:

Tables have a variety of functions. People usually chose tables that fit the size of their dining rooms. However, sometimes a table may not be large enough to entertain extra guests, or take up too much space for small families or in small apartments. Space saving tables can solve this problem due to their transformable features. In Figure depicts a space saving table that can be utilized as a lamp table when it is not needed, and can also be used as a large dining room table when guests are visiting. (*Shiyao Wang,2013*)



The Space Saving Chair:

In recent years the space saving chair has become very famous. The main function of this sort of chair is that when not in use, it saves space. Figure is one example of these chairs; the chairs can easily be installed and disassembled as shown.



Id. PRIYA KANDALKAR

5P a g e

Space Saving Mechanisms:

In the red circle of Figure is one of the examples of special mechanism that have been used on transformable space saving furniture. This type of mechanism is mounted on the sides of bed frames in order to connect the shelf and bed frame. The specialty of this mechanism is the items on the shelf can be remaining in place when the shelf is moved up or down. The shelf can also be used as legs when the bed is in use, as it shows in figure. (*Dhiraj V. Astonkar, Dr.Sanjay M. Kherde,2015*)



Applications and Future Development:

Building designers can work with transformable space-saving furniture designers to ensure that the furniture fits the layout of the apartment sufficiently and saves even more space. The new design not only saves the energy of the building, but also makes use of the limited area of the home as much as possible. The main purpose of this design is to introduce an energy system innovation. However, transformable space saving furniture plays an important role in this energy saving house. This furniture makes it possible to design the smallest possible design the area of construction.

Cost and Price:

Based on research, there are only a few companies which design and produce transformable space saving furniture. These products are not yet popular or known to the general public. The main reason for this is that the price of these products is too high for people who live in small apartments. Resource Furniture, as an example, is one of the leading brands of this kind of furniture. The main material of their products is High Density Fiberboard (HDF), and all of their products are made in Italy. These are the main reasons that their products have a very high cost. There are many options companies like Resource Furniture can choose for relocating their manufacture factory. China and South Asian countries, such as India and the Philippines, have relatively lower labor costs and land prices, along with more regulated

markets than those of other developing countries. (*Dhiraj V. Astonkar, Dr.Sanjay M. Kherde,2015*)

Conclusion:

People today tend to move to metropolises for their greater job prospects and affluent lifestyles. This urbanization phenomenon causes cities to have comparatively less free space available, and it also increases the price of their property. Transformable space-saving furniture is an innovative product with plenty of room for future development and an enormous potential metropolitan market. This is relevant in terms of living in small flats and furniture. Not everyone has the same furnishing needs. Some of the transformable furniture today could work perfectly for some, and be terrible to others. With this individuality in mind: Before designing or choosing furniture for a space it is important to understand the user's preferences and activities. It is important to have furniture with more than one feature to save as much valuable space as possible.

REFERENCES

1. Alter L. (2013). Houses are getting smaller but furniture are getting bigger. What is going on? Treehugger.
2. Astonkar D., Kherde S., (2015). Design & Development of multipurpose, space saving seating arrangements using Ergonomics. International Journal of Engineering Research and Applications (IJERA) ISSN: 2248-9622
3. Nasser F., (2013). Multifunctional furniture underprivileged communities: a milestone in sustainable Development. *Department of Computer Graphics Technology Degree Theses*. Paper 26.
4. Salter Spiral Stair. (2016). Multifunctional furniture for every room. Salter Spiral Stair.
5. Thogersen K. (2017). Mobler for små leiligheter. Survey, TPD4500 – Design 9
6. Thogersen K., (2017). Small spaces need smart solutions Designing furniture for small spaces, in connection with human wellbeing.
7. Wang S., (2013). An analysis of transformable space saving furniture.
8. Waswo A. (2013). Housing in Postwar Japan – A Social History. Routledge, p. 128