

Interior Design
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Lecture - 30
Interior Design: Summary and Discourse of week 6

Namaste, hello everyone. Welcome again to my NPTEL course on interior design. We are at lecture number 30 today, and we are going to see the summary and discourse focusing on week number 6. This is the broad content for today's discussion. So, I am going to summarize interior design technology, and we discussed all these during week number 6. So, through the lens of innovative trends and technologies, especially talking about tiny houses and origami.

Then, interior design technology focusing on experimental finishes and materials, along with some interesting joinery details. Then, we talked about VM (visual merchandising) and also the concepts of modularity, portability, foldability, and DIY. And we also saw some new concepts related to installations and decor. And, of course, there is a list of references as always. So, since this is a summary, I am not going to explain everything again.

So, we focused on tiny houses and the innovative trends—why they have become very popular in recent years and why they are being adopted. Then, we also talked about the importance of color when designing a tiny house and why light paint colors are preferred in compact house interiors. And we also talked about the use of bright colors in wallpapers, but they need to be utilized cautiously, and there is more preference given to light colors. We also talked about choosing a scheme like black and white and what it does to a compact space when we talk about tiny interiors. And then, we talked about adding some plants and making the space lively.

We talked about the environmental concerns, the growing challenges related to sustainable ways of living, and why it is becoming increasingly crucial to consider tiny houses or compact spaces. We also discussed some of these examples in light of environmental concerns. We talked about storage and bookshelves, and how tiny house design necessitates being inventive while keeping in mind space optimization, multifunctionality, and designing unique joinery. We discussed the importance of

windows and openings and how they should be treated as design elements in compact spaces such as tiny houses. We also talked about lighting and explored interesting ways to capitalize on it as a key element when designing tiny houses.

We also reviewed some case studies. I have included one here because I found it particularly interesting. So it was the tiny holiday home which is situated in Netherlands and it is designed by Chris Collaris, i29 Interior Architects with a mere footprint of 75 square meters. Its setting and context are fascinating, and the compactness is achieved through thoughtful design. Careful orientation, blocking, and massing create pleasant spaces within this nature-friendly context.

We examined this case study in detail. Then we discussed origami, including its folds, origins, and types. We briefly covered these topics and explored how origami principles could be integrated into interior spaces or furniture design. We also considered how origami could inspire such designs. We reviewed some examples like this.

We saw more examples focusing on furniture which is based on origami or inspired by origami. Some examples like this. More images. We tried to understand how origami can be incorporated in interior architecture and then we tried to understand the concepts of static rigid, deployable fixed, deployable kinetic and how do we achieve certain structures, you know, focusing on these concepts and utilizing the origami techniques and principles. We saw some examples from interior architecture where origami has been applied.

We saw this very interesting example of circular origami pleating applied in interior architecture for space making. And we did discuss a bit on the pine cone structure and water bomb structure and how, you know, origami has inherently a structure and an embedded system within it. And, you know, what does this kind of a structure particularly do and, you know, for achieving a certain kind of design. We also tried to see some materials which are quite popular and which are friendly while we are utilizing origami principles and techniques and they could be used whether it's for the rigid frame structures or portable structures or for interior spaces. Then we tried to see experimental finishes and materials along with some discussion on joinery.

And we were trying to understand these trends and this interior design technology. So we had an overview discussion on smart materials and how they are designed to respond

to environmental stimuli such as temperature, light or pressure. And we talked a bit about biophilic materials and how they emphasize a connection between nature and built environment. And 3D printed elements, which are quite popular and which are driving the interior design spaces through the use of technology. We talked about the importance of choosing sustainable materials and we did talk about concepts like reclaimed materials, repurposed materials, recyclability, eco-friendly materials and so on.

And, you know, also transparent solar panels and how they are integrated into windows or glass surfaces and why they are crucial for energy-efficient solutions while we design interior spaces. We also talked about interactive surfaces and why they are, you know, gaining popularity. You see a lot of images along with the sources. We give credit to all sources over here, and images help us understand a few aspects. Concrete and cement composites—we discuss these kinds of materials and, you know, how they are being used in interior spaces with some experimentation, reinventing certain traditional materials and giving them a new sort of application.

We also saw nanotechnology coatings and, you know, how they offer advanced surface coatings which could be self-cleaning, antimicrobial, anti-fingerprint capabilities, and so on. We also saw biomimicry and, you know, the fabrics that imitate the water-repellent properties of lotus leaves and some wall coverings, and we saw more interesting examples from biomimicry. Then, of course, we talked about joinery—not necessarily experimental, but popular and common when we talk about interior architecture and the design of interior spaces. And we talked about the importance of joinery, specifically when we are custom-designing furniture, more so in the case of custom-made designs. And, of course, it was an overview discussion on popular kinds of joinery.

So, the mortise and tenon joint is what we started discussing. And we also saw this beautiful joint, which is the dovetail joint. And, you know, what kind of applications it offers. And it's one of the strongest, actually, in terms of wood joinery that we have. We saw this finger joint, quite used in the industry.

And what is its purpose? Then we also saw cabinetry and storage solutions and how they particularly utilize certain kinds of joints. And we did see dado joints. also rabbit

joint. Then we also discussed tongue and groove joint and we tried to understand the subtle nuances of mortise and tenon versus tongue and groove joint.

We saw architectural mill works and how joinery is applied to architectural elements like doors, windows, panelling, mouldings, trim works. And we saw the importance of joinery and the vital role it plays in constructing staircases and handrails. We try to understand something called as bridle joint. It's two types. Half lap joint.

integrated built-in features and how joinery allows for the integration of built-in features such as window seats, banquetts, built-in shelving. Then we also saw decorative detailing and how joinery techniques could be utilized for adding decorative detailing to interior spaces. restoration and renovation and how joinery becomes very important for projects like these. Then we understood material selection and how joinery is quite dependent also on material selection and with the judicious selection of material and interesting and careful design of joinery, great results could be achieved. Then moving on, we talked about the very important concept of visual merchandising, which is VM, along with interesting concepts such as modularity, portability, foldability and do-it-yourself, which is DIY.

So starting with what is VM, moving on we try to understand the types of visual merchandising which could be display windows, interior displays, point of purchase displays, seasonal displays, category displays, interactive displays and very important these days e-commerce and in-app storefronts. Some crucial elements of VM and we tried to discuss all of these. So, signages, lighting, color, of course, whenever we talk about interior spaces, creating a thematic sort of a focus. Then we try to understand this very important thing that how store layout itself can act as VM and what are its common examples. So, of course, the importance of store layout as a whole.

And then we saw this very interesting chart or inventory, which is very visual and it talks about. These kinds of store layouts and how they become a very, very powerful tool for driving VM as an important strategy. And we discussed the grid floor plans, loop floor plans, diagonal floor plans, the herringbone floor plan, boutique, free flow. Forced path floor, angular floor and the spine floor plans and very interesting discussion on what these particular layouts do to the retail store and how the circulation is achieved, what is the impact. We also tried to discuss briefly the future of VM and how AI driven technologies are going to rule now the future of VM.

Also, retailers are leveraging data driven insights to better inform the decisions related to VM. Then we talked about the concept of modularity, how crucial it is when we talk about interior architecture projects. And, you know, how it helps in subdividing a space into smaller parts and then how it could be used not just in terms of, you know, space or architecture, but also in product design, interior design and diverse domains on different scales. And then we discuss the benefits and opportunities that modularity offers when we talk about interior design. And of course, the flexibility it offers, functionality it ensures, the efficiency it brings along and the possibilities of customization it opens up.

So the importance of modularity, with some images and examples, is what we saw in detail. Some examples like this, and then we moved on to discuss portability. So, again, how the concept of portability in interior design is revolutionizing our designs—how it is important for providing flexibility, adaptability, and, you know, it can suit the evolving needs and preferences of the clientele, of the users, and can provide a variety of options for space design. So we talked about various means through which portability could be achieved. Furniture, of course, being a very important one, and within that, multi-purpose and convertible furniture being very popular and quite handy.

Portable storage solutions, decorative elements, and also some temporary installations. We saw some examples. And then, what are the benefits portability offers? How it allows the maximization of space utilization and then, you know, adapting to different activities or events, accommodating guests, creating a fresh look whenever desired, and especially useful for those living in rental spaces or who frequently change their environments. Then we talked about the concept of foldability. And we discussed how it is also an important concept.

It focuses on space-saving. It provides solutions that optimize functionality and multi-use within a space. Also, it allows for efficient storage plus easy transportation. So it's quite crucial when we talk about interior architecture projects. Then, of course, foldability can be applied to various aspects, including furniture, partitions, fixtures, and these are some of the prominent examples.

So folding furniture, folding partitions and screens, foldable storage solutions, foldable fixtures, even foldable walls or ceilings and we again saw some case studies and examples. And what are the practical advantages the concept of foldability offers and

how it optimizes space utilization again, makes it adaptable to different needs and creates versatile and functional interior environments. Then we discussed the concept of DIY and how it, you know, sort of empowers homeowners, maybe people who are not even professionally trained in interior design and how it opens up the world of opportunities for them to be able to play with spaces and design their own home environments. although I did talk about the importance of training and hiring a professional designer. And we discussed some ideas, tips, thumb rules for DIY and interior design and how it is very important to focus on personalization, particularization, cost saving, inspiration, design elements and design principles and to address the skill level of the people who are utilizing

DIY concepts. And it is very important that I focus again that design elements and design principles need a thorough understanding, a rigorous training. And it's always recommended to have professional help and hire trained personnel. Then we also talked about the integration of these concepts, the permutation and combination of these to achieve very interesting unconventional and experimental results. So we talked about integrating modularity, portability, foldability, DIY.

and creating dynamic spaces which are ever-changing, adaptable, multi-use, which can be reconfigured, assembled, disassembled, and suit the changing needs of the customers and the clientele. We talked about why it is very important to integrate these concepts and come up with new unconventional methods of designing. And then we moved on to see some new concepts focusing on installations and decor. So, we saw some very interesting examples of installation design starting with understanding what installation design means to begin with and then seeing some examples like crashing waves which is a studio exercise which was done at CEPT University and how it is placed and how it works and what does this installation do to engage the people and the passerby. So,

This discussion we did and an interesting interrelationship between the swing, the user and this entire design and how this entire system and assembly works and people respond to it and vice versa. We saw very, very celebrated and interesting installation from the BMW Museum in Germany today. And you know how it showcases the design process of some significant models from the company's history. And what does this installation do to engage the public and the viewers? This very famous installation called Cloud Gate by the popular Anish Kapoor.

And what is its construction like and what are its primary dimensions to understand the magnanimity and scale of it and how it was achieved? through design and construction and technology. And what were the materials used to create impacts like this, that it creates a reflection of the entire city and the park which is nearby and the activities of the people, how it becomes a selfie point and it becomes very engaging. We talked about Subodh Gupta's installations. We specifically talked about Sangam and we talked about his fondness to use utensils and create landmark exemplary designs out of those.

Then we talked about decor. And we saw some examples of, you know, works by the studio Oorjaa. We saw some examples of lamps and we saw very interesting use of materials, their permutations and combinations and very interesting forms and very, very natural, you know, color combinations which are provided by these exposed materials. And the important shapes and forms they take and they create this point of attraction, attention while catering to functionality. Plus the most important thing, addressing sustainability aspects and utilizing eco-friendly materials.

We saw more examples of lamps and the different materials, forms, and functions that these lamps cater to. Then we saw this pillar of light—again, very beautiful, aesthetic, functional, and made with eco-friendly materials. We especially focused on the aspect that the studio concentrates on creating an ecosystem, working with makers and caregivers, and providing livelihoods to craftspersons. More items we saw some of the works by the Alaya Design Studio and again whether it's a lamp or it's a stool or furniture piece or some kind of a lighting chandelier or an object of decor and how natural materials are employed for creating these designs. More examples from decor: chairs, furniture, coffee tables, and interesting local stories from the context.

We discussed this particular example during the lecture. And then there's this lounge chair, made of bamboo splits, natural fiber, and jute. So we are talking about natural materials. We're talking about sustainability. We are talking about reducing harm to the environment and how interior designers

can take that responsibility and create these kinds of interesting designs, which have interesting forms, which are very, very functional, but they are also very, very friendly to the environment. We saw this cohesive list of references, you know, covering all these important aspects, focusing on the interior design technology through diverse

lenses that we saw and which I just summarized today. Thank you so much. I'll see you next time.