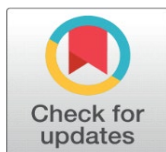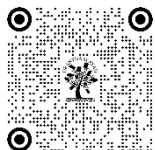# THE EFFECT OF MODERN DIY TECHNIQUES TRANSFORMING CONSUMERS INTO DESIGNERS

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ABSTRACT

In the last ten years, networking, global communications, and technology have all advanced quickly. By enabling consumers to easily use new materials with the right procedures, technological improvements paved the path for clever interior design solutions and eventually began challenging interior design pros. This includes the introduction of Artificial Intelligence and Augmented Reality technology, Interior planning apps, user-friendly designing software, and online material information along with mediatization, which is expanding the possibilities regarding both the end product and the process of making directly from B to C marketers. Therefore, the phenomenon of Do It Yourself arises in this era where the internet handles everything and provides accessibility to the consumer. In short, DIY bypasses the Interior Designing professionals for home styling activity by making things for home independently and not spending much on Interior Designers.

Keywords: DIY, Home Décor, Interior Design, Interior Styling

1. INTRODUCTION

There are several modern techniques that are transforming DIYers into interior designers. The art and science of upgrading a building's interior to provide a more hygienic and visually pleasant environment for those who use the area are known as interior design. Such projects are planned, investigated, coordinated, and managed by interior designers. A project may require conceptual development, space planning, site inspections, programming, research, communication with

stakeholders, construction management, and design execution. Interior design is a complicated career. Seth & Kumbhar (2019)

Online design tools have made it easier than ever for DIYers to create professional-looking interior designs. These tools allow users to experiment with different colours, furniture layouts, and other design elements to create a cohesive and visually appealing space. The majority of individuals in this society are not wealthy, which means that interior design is actually intended for wealthy people who lack the time to create it themselves. Then, only they will decorate their home. It's a good thing to share. The ability of people to adopt positive values is wonderful. That viewpoint makes it clear how internet users' existence affects people's lives. Alimin (2019)

In the field of interior design, augmented reality is becoming more and more common. DIYers can utilize AR to imagine furniture and decor in their home before making a purchase by using a smartphone or tablet. This can assist customers in avoiding expensive errors and ensuring that the products they select go in well with their current design.

Interior design is still developing, and as a result, struggles to define and establish its identity, in contrast to other spatial disciplines like architecture. On the one hand, there is the case for interior design to more clearly define its fundamental body of knowledge and, in doing so, set clearer boundaries between it and other professions like architecture. On the other side, advocate for it to become more "undisciplined," for the boundaries and connections to be more pliable, and for it to be more receptive to shifting social and environmental circumstances. Hazim (2017)

Nowadays, a lot of interior designers provide online consultations, allowing DIYers to consult with experts without leaving their homes. For people who desire to develop their interior design abilities, this can be a practical and affordable solution. DIY interior design is the focus of an increasing number of design blogs and social media profiles. For anyone looking to advance their interior design abilities, these sites offer ideas, instructions, and guidance.

In general, these contemporary methods are making it simpler than ever for do-it-yourselfers to create stunning and practical interior designs. Anyone may become an interior designer with a little practice and commitment by utilizing these resources.

2. METHOD

The rise of do-it-yourselfers in the modern period can be attributed to a number of factors. These are a few scenarios that could apply:

- **Access to Information Has Increased:** With the internet's advent, people have had easier access to knowledge and resources. This implies that people can readily learn how to complete tasks alone, from straightforward assignments to house repairs.

- **Increased Access to Information:** People now have more access to resources and information than ever thanks to the development of the internet. This implies that people can readily learn how to complete tasks alone, from straightforward assignments to house repairs.

- **Saving Money:** DIY tasks can frequently be less expensive than hiring a professional. This can be a major incentive in a world where many people are trying to make ends meet.

- **Personal Satisfaction:** Many people discover that finishing a do-it-yourself job makes them feel proud and successful. People take pleasure in putting their hands to work and experiencing the gratification of seeing the result of their labour.

- **Environmental Issues:** Environmental issues are a driving force for some DIYers. They can frequently employ recycled materials or more environmentally friendly solutions than what is offered in stores by doing things themselves.

- **Expression of Creativity:** DIY projects can be a way for people to show off their originality and ingenuity. They can make something that is more suited to their tastes and preferences by manufacturing it themselves.

Hence, the rise of do-it-yourselfers may pose difficulties for interior designers in the near future. These issues might be researched using the following criteria:

1) E-COMMERCE AND CONSUMER BEHAVIOR.
2) SMART MATERIALS IN INTERIOR DESIGN.
3) COMPUTER TECHNOLOGY FOR INTERIOR PLANNING.
4) ADVANCED TECHNIQUES FOR SMART HOME DESIGN.

In general, these contemporary methods are making it simpler than ever for do-it-yourselfers to create stunning and practical interior designs. Anyone may become an interior designer with a little practice and commitment by utilizing these resources. Arif (2022)

3. RESULTS

1) E-commerce and Consumer Behaviour:

E-commerce can be a terrific resource for DIY interior designers in a number of ways:

Access To a Broad Selection of Products: E-commerce sites provide a wide selection of goods that DIYers can use to complete their interior design projects all in one location. DIYers can search through thousands of products and locate anything they need, from furniture to supplies for the home.

- **Price comparison and deals:** E-commerce platforms enable DIYers to compare costs and locate special offers on products, which can help them save money. Also, many e-commerce websites provide savings and promotional codes that can be used on purchases.

- **Convenience:** DIYers may explore and buy products from e-commerce platforms in the comfort of their own homes, which makes shopping for interior design supplies more convenient. Also, they can avoid the inconvenience of visiting actual establishments by having the goods delivered right to their door.

- **Inspiration And Ideas:** E-commerce sites frequently feature interior design ideas and inspiration, which can assist do-it-yourselfers to feel motivated and come up with project ideas.

- **Customer Reviews:** Customers frequently leave product reviews on e-commerce platforms, which might assist DIYers in choosing the right goods to buy. Users can browse reviews written by other do-it-yourselfers to see whether the products are suitable for their tasks.

In terms of E-evaluation, India is ranked third. Online consumer purchasing behaviour is a relatively new phenomenon in the world of e-business, and it will

shape how people shop in India in the future. The majority of businesses operate an online store to market their goods and services. The buying habits of people who shop online are very prevalent in the world market. The young/new generation in India is using the internet and mobile phones more and more, which opens up new opportunities for online shoppers. The world of consumer behaviour is changing as a result of the internet, and this online business is booming thanks to customer trust, technological comfort, and access to the Internet. The buyer that is influenced by the internet is more knowledgeable about the brand model they want to purchase. The consumer is constantly seeking out marketers who can give him the best brands, value, and security while making purchases. Willman-Iivarinen (2017)

In general, e-commerce may be a great resource for DIYers who are interested in interior design, giving them access to a wide variety of products, price comparisons and bargains, convenience, inspiration and ideas, and customer feedback. Radhikaashree et al. (2018)

2) Intelligent Materials for Interior Design:

Smart materials, according to NASA, are those that "remember" configurations and can adapt to them in response to certain stimuli. Smart materials and structures are those objects that sense environmental events, process sensory information, and then act on the environment, according to the Encyclopaedia of Chemical Technology. Two chemists, Jacques, and Pierre Curie, are credited with the "discovery" of smart materials, and mechanical engineering and electrical engineering currently share ownership. Electrical engineers are in charge of the operational platform (packaging and circuitry) and microelectronics, which is a vital component of many smart systems and assemblies. Mechanical engineers deal with energy stimuli, kinematic (active) behaviour, and material structure. Al-Baldawi (2015)

Smart materials, often referred to as functional materials, are substances that have the ability to alter their characteristics or behavior in response to environmental factors including temperature, light, pressure, or electrical signals. Due to their special qualities and capacity to enhance performance and efficiency, they have been utilized in a variety of industries, including aerospace, healthcare, and automotive. Chen & Wang (2020)

DIYers have recently been experimenting with smart materials in interior design to produce creative and engaging settings. DIYers can employ clever materials in interior design in the following ways:

- **Thermochromic Pigments:** These pigments transform their color when heated, making them ideal for designing interactive surfaces like furniture or walls. DIYers can add an interactive feature to the furniture, like a coffee table that changes color when a hot cup is placed on it, or make a distinctive accent wall using thermochromic paints.

Figure 1

Figure 1
https://www.thermographics.com/portals/0/Images/Specialty%20Ink/Thermochromic/specialty%20ink%20500px.jpg?ver=2016-04-12-130814-247

- **Shape-memory Alloys:** They are perfect for producing dynamic elements in interior design since they can change shape when heated or cooled. DIYers can make movable walls or transformable furniture, such as a chair that adapts to the user's position, using shape-memory alloys.
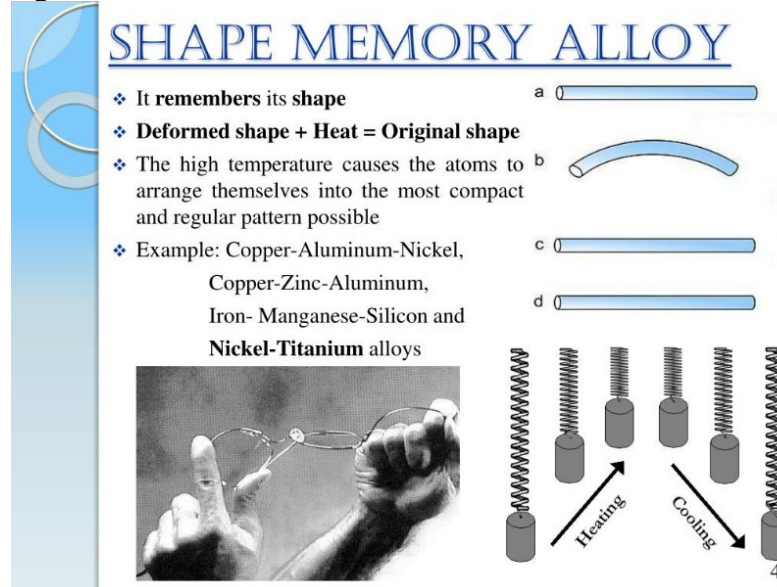
Figure 2

Figure 2 https://image1.slideserve.com/2341673/shape-memory-alloy-l.jpg

- **Electrochromic Glass:** It is ideal for producing privacy walls or windows that automatically adjust to the quantity of sunlight since it can alter its transparency or color in response to electrical signals. DIYers may make a distinctive partition wall that also functions as a projection screen using electrochromic glass.
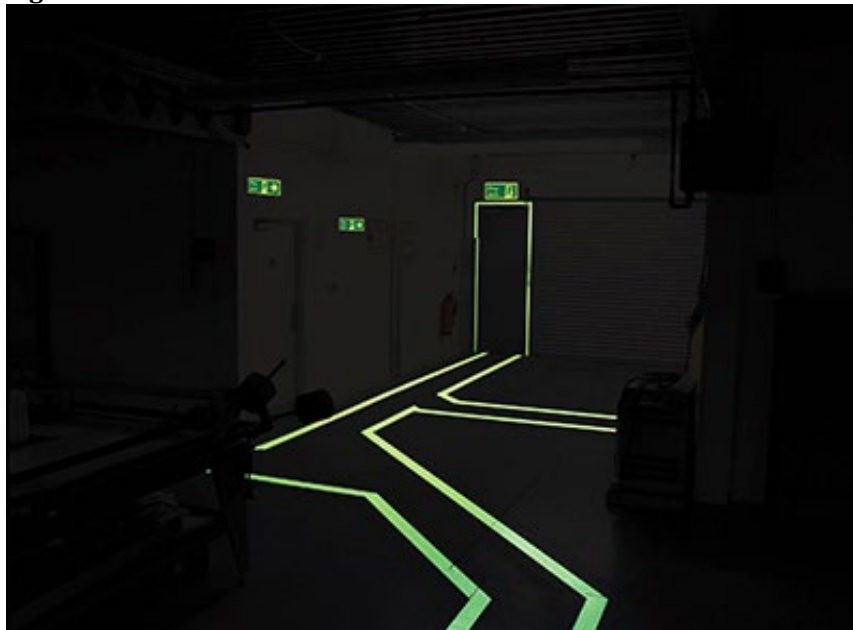
Figure 3

Figure 3
https://i.pinimg.com/originals/e2/c6/97/e2c6973292b6608b32bdbfb40c68714f.jpg

- **Photoluminescent Paint:** It is perfect for establishing a distinctive atmosphere in interior spaces since it glows in the dark after being charged by ambient or artificial light. DIYers can add a glowing accent to furniture or construct a ceiling covered with stars using photoluminescent paint.

Figure 4

Figure 4 http://www.realglow.com/images/pl-paint/3.jpg

- **Smart Textiles:** These are perfect for designing dynamic and interactive interior spaces because they may alter their color, pattern, or texture in response to outside stimuli. DIYers can add a touch of color-changing fabric to furniture or make interactive drapes out of smart textiles.
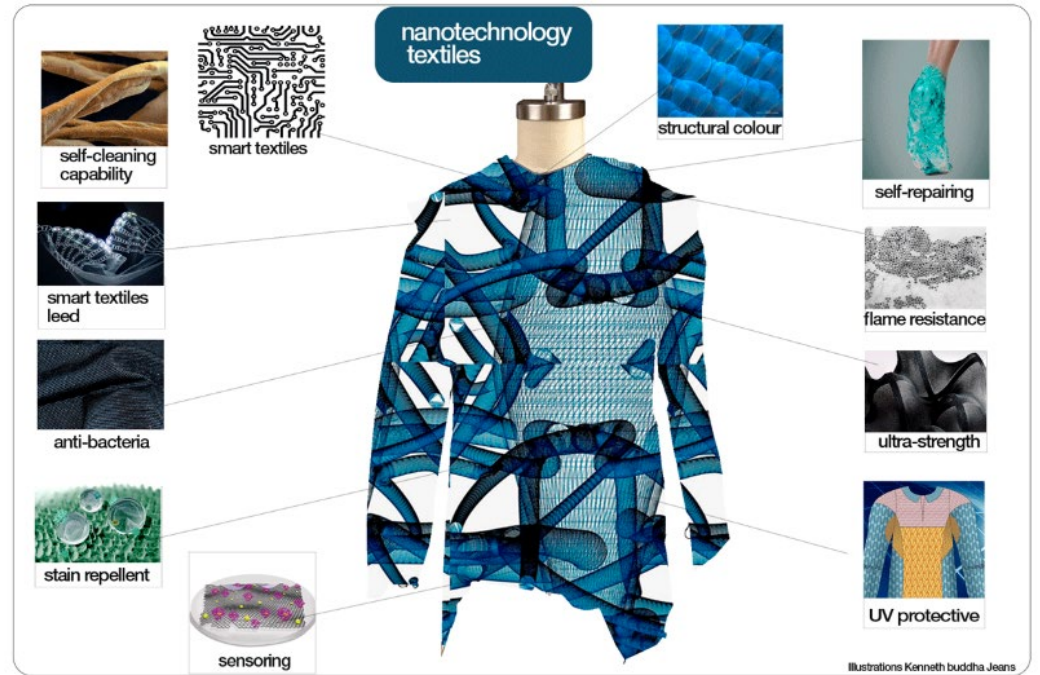
Figure 5

Figure 5
http://fashnerd.com/wpcontent/uploads/2017/09/AAEAAQAAAAAAAAPxAAAAJDQ3MjQwYjYw
LWMyMTQtNDQ2Ny1hNDA0LWQ0OTgwOTk5ZWRkMg.png

Overall, incorporating smart materials into interior design can give any room a distinctive and engaging touch. DIYers can experiment with many intelligent materials and techniques to design a unique, useful place that showcases their ingenuity and sense of flair. Dola & Rusli (2011)

3) Computer Technology for Interior Planning:

DIY interior designers have access to a variety of internet interior planning tools. Here are a few possibilities:

- **RoomSketcher:** With the help of this application, you can make 2D and 3D floor plans, try out various arrangements, add furniture and accessories, and see your designs in a realistic 3D environment.
- **Planner 5D:** Using this tool, you may design in 2D and 3D, browse a selection of furniture and home accessories, and connect with other users to share and receive feedback on your ideas.
- **Homestyler:** You can use this application to upload a picture of your space and try out various design aspects, including furniture, lighting, and flooring. Moreover, you can design 2D and 3D floor plans.
- **IKEA Home Planner:** This software is intended exclusively for planning environments with IKEA furniture. You can experiment with various furniture arrangements and make a 3D model of your room.
- **SketchUp:** This tool is more complicated and has a slight learning curve, but it gives a lot of customization and flexibility choices. You may build 3D models of your room and try out various design components.

It is possible to build and render a three-dimensional photorealistic (3D) view from the perspective of a 3D object that has been carefully placed within a 3D scene using a system and technique in a client-server computing environment. A client is set up to interact with a server and comes with a client programme that can update and display scenes using a graphical user interface (GUI). Seth & Kumbhar (2019)

Overall, these tools can be a great way for DIYers to experiment with different design ideas and visualize their spaces before making any costly renovations or purchases. Abdel-Hadi & Harb (2018)

4. ADVANCED TECHNIQUES FOR SMART HOME DESIGN

More and more DIYers (Do-It-Yourselfers) are using cutting-edge technologies to improve their interior design projects. In the following ways, technology is being used in do-it-yourself interior design:

- **Augmented Reality (AR) And Virtual Reality (VR) Tools:** To construct a virtual depiction of their home area, DIYers are using AR and VR tools. Before making any physical alterations to their homes, users can utilize these tools to imagine how furniture, paint, and other items would look there. Also, they can experiment with various layouts, color palettes, and designs.

A new technical science called artificial intelligence (AI) and smart home design is capable of studying theories, methodologies, technologies, and application systems for simulation. The inevitable trend of the Internet era is interior design with an ever-closer integration of AI. The smart house has now become a member of the family. Not only does it improve user comfort, but it also increases portability and safety. It can give us a green and sustainable living space, even from an environmental standpoint. Willman-Iivarinen (2017)

Figure 6

Figure 6 https://www.techsmashable.com/wp-content/uploads/2020/03/augmented-reality-vs-virtual-reality.jpg

- **3D Printing:** DIYers may make unique furniture and decor using 3D printing technology. Users are able to create their own 3D models or download already-created ones from web shops. Complex designs can be produced with 3D printing that would not be feasible using conventional production techniques.

Figure 7

Figure 7 http://realitypod.com/wp-content/uploads/2015/03/3d-printing.jpg

- **Smart Home Appliances:** DIYers are integrating smart home appliances like voice-activated thermostats and lighting, which are managed by smartphone applications or virtual assistants like Amazon Alexa and Google Home. More control over a room's atmosphere is possible thanks to this technology, which can also aid in lowering energy usage.

Figure 8

Figure 8 https://www.homeappliancesworld.com/files/2017/06/Smart.jpg

- **Software For Interior Design:** There are many tools available that let DIYers draw floor plans, experiment with various color schemes, and see their design ideas come to life. Some software even has 3D rendering capabilities, enabling users to produce representations of their creations that are photorealistic.

Figure 9

Figure 9
https://i.pinimg.com/originals/df/fe/98/dffe987e55bdaabbaca44b791668926c.jpg

The complexity of product diversification, individualization, indoor planning, and design is increasing as a result of the Internet's quick development of high information technology. How to monitor and improve the indoor environment while enhancing the head of the household's living comfort using practical computer monitoring technology. Many academics are developing and studying this subject. After that Researchers have given the development of computer monitoring systems a lot of thought. Ehteshami (2019)

Numerous theoretical investigations and applications have aided in this technology's quick advancement. Currently, wireless sensor network technology is present in all facets of our life and offers numerous advantages to all. Sever (n.d.)

Generally, technology is assisting DIYers in producing interior designs that are more sophisticated and distinctive. Additionally, it improves process efficiency by enabling better planning and visualization before any actual changes are performed.

- **'Technology Push Vs. Market Pull'**

Whether improvements should be presented by "technology push" or "market pull" is one of the key questions in smart technology. When a new technology serves as the impetus for a marketable product or problem-solving innovation, this is known as a "technology push." The term "market pull," on the other hand, suggests that the innovation in the product or process was motivated by consumer needs. Despite the widely used chicken-and-egg analogy to describe the symbiotic interdependence of the impulses, there is a disconnect between market pull and technological push. Hamre (2013)

In the building sector, interior design has the capacity to bridge the divide between technology push and customer pull. Technology and market might be rephrased as "technology and application" in the construction sector. When it comes to bridging the divide between "technology and application," or "product and user," interior designers can be more proactive. These potentials result from the profession's practices of interior design. Poursani (2013)

- **Can DIY Make Everyone a Designer?**

When designers can effectively use social media techniques, they transition into DIYers, and DIYers transition into designers when they can engage with followers or students. A person can be both a designer and a DIYer if they are capable of mastering both skill sets at the same time. Alimin (2019)

Table 1

Table 1 The Designers' and DIYer's Differences	
Designers	**DIYers**
2D and 3D drawing abilities, including rendering	Using social media to market
Storytelling with an Original Idea (Writing Skills)	Storytelling (Writing Skills)
Problem-solving	Use Persuasive/interesting Words
Unique/Identity	Photography
Philosophy	Video Maker (Tutorial)
Function/Valuable	Editing/Graphic Drawing Skills
For the Wealthy & Upper Class	For Everybody (All Classes)

(Adapted from Author: Alimin (2019)

When designers can effectively use social media techniques, they turn into DIYers, and when DIYers can engage with followers or students, they turn into designers. A person can be both a designer and a DIYer if they are capable of mastering both skill sets at the same time. Alimin (2019)

5. FINDINGS AND DISCUSSION

DIYers may create stunning and useful rooms with their imagination and resourcefulness. Before pursuing official schooling or training in the area, many professional interior designers begin as do-it-yourselfers who experiment with decorating and designing in their own homes. Individuals may also have educational credentials in allied disciplines like graphic design, fine arts, or architecture.

For budding interior designers, practical experience is just as crucial as formal schooling. Many people decide to work as assistants or interns for seasoned designers or design studios in order to develop their professional networks and obtain practical experience. In conclusion, although DIYers may have a love and talent for interior design, professional interior design involves a combination of formal education, on-the-job training, and practical experience.

Modern DIY methods have made it simpler than ever for people to become designers during the past ten years thanks to technological advancements. These methods have made it possible for customers to take charge of the design process and produce goods that are tailored to their needs and tastes.

The DIY movement has also been aided by the growth of maker spaces and collaborative workspaces. Customers have access to equipment, resources, and knowledge that they might not otherwise have. They also provide chances for cooperation and idea exchange, which can encourage originality and innovation.

Consumers may now design and visualize things in 3D before they are ever built thanks to technological advancements in virtual reality (VR) and augmented reality (AR). In order to gain a better idea of how a product will appear and feel before

committing to a final design, buyers may now experiment with various designs and combinations thanks to technology.

Ultimately, modern DIY methods enable customers to become designers by giving them the ability to take charge of the design process and produce goods that are tailored to their unique wants and tastes. Future DIY projects are likely to be even more inventive and creative as these technologies develop and become more widely available.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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