

The importance of digital lightening fashion technique in creating innovative fashion marketing

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Abstract:

During the later decades of the previous century and the first decade of this century, the global textile market saw considerable changes, in today's market, which is defined by fierce rivalry, understanding and applying marketing principles is critical for achieving great business results in the fashion industry, that is why fashion marketing is becoming more important and playing a significant part in the management of upcoming developments, and Because of the applicability of marketing to fashion products and services, a new discipline of marketing known as fashion marketing has emerged. The development of the market through the history of fashion in the beginning occurred due primarily important inventions, technological innovation, the socially large-scale events and global processes and phenomena in various spheres of life, especially in the field of culture, and politics. Thanks to technological advancements, fashion visual perception aspects, and other factors, modern fashion design has attained average function and performance, they sell as a sign of social and cultural connectedness by demonstrating modern people's sensitivity and readiness to express themselves. This article will attempt to bring together both the practical and conceptual aspects of fashion marketing leading to a set of guidelines which may be used to emphasize the role of digital lightening fashion technique and the conceptual aspects of fashion marketing otherwise, designers of digital lighting clothes do not invent new lighting technologies but dynamically integrate them into developed models. The range of lighting and electronic devices applied in clothes design, is very broad: from tiny light emitting diodes to liquid crystal (LC) screens, from diode lasers to electro fluorescent radiators. Integration of such devices into modern clothes design increases the esthetic, ergonomic, information and biological parameters.

Keywords:

Fashion Marketing,
Fashion Marketing Mix,
Digital Lightening
Fashion Technique.

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Introduction

Textiles as an academic subject has a long history in the United Kingdom, stemming from the robust textiles sector of the Industrial Revolution, and textiles study has aided in the development of major scientific and technological breakthroughs. Fashion is an integral component of social interactions and society as a whole, and it has evolved in tandem with the evolution of society. Fashion, as a very dynamic industry, is marked by frequent, thrilling changes in the realm of innovation on a global scale. Fashion is a societal phenomenon that is largely influenced by market trends and shifts. From this perspective, fashion may be found in all human activities and all realms of existence, ranging from technological, medicinal, and cultural, artistic endeavors while marketing plays an important part in the fashion industry. (Milica Slijepčević, 2016)

The phrases fashion and fashion marketing are used in relation to the marketing of clothes in this article. Because all parts of textiles and garment production make for a large proportion of the overall textiles

industry, the fashion industry is a vitally significant area for textiles. As a result, fashion marketing is an important part of the overall study of textiles. Fashion marketing has grown in popularity as an academic subject during the last two decades, but its definition as a concept has received little attention. In its most basic form, fashion marketing is a more specialized version of 'generic' marketing. (Barnes, Liz, 2013), Fashion is a large international commercial industry that is rapidly evolving. Marketing plays a crucial part in the management of development and transformation. (Easey, Mike, 2009)

Nowadays, it's all about having a unique identity and expressing oneself. Almost everyone aspires to be one-of-a-kind or to make a strong first impression. This is frequently accomplished through the use of dress and fashion. This takes on a whole new dimension thanks to digital lighting fashion's revolutionary technology and its role in fashion marketing. Digital lighting fashion considered as type of smart textile, Wearable smart textiles are materials that increase usefulness for the

user by presenting a set of desirable features or sensing, responding, and/or adjusting to stimuli in the settings to which they are exposed.

Fashion, entertainment, sports, and safety applications all benefit from LED lights on clothes. Apparel with integrated LED displays may be used for a variety of purposes, including Smartphone-linked alerts and glow-in-the-dark clothing. Displays can be sewn into the arms of a garment to transmit information such as biometric data or programmable patterns. LED costumes are used in the entertainment industry to grab and hold the audience's attention. Clothing that changes color with the rhythm in musical performances, clothing that changes color to bring attention to certain performers, and clothing that creates fascinating effects via the combination of light and colors are the most common types of costumes. The fashion and sports sectors are anticipated to continue to experiment with innovative methods to incorporate technology into apparel.

Statement of the problem:

The research problem lies in trying to answer the following question:

- Is it possible for fashion marketing to make the most of the lighting digital fashion technology with increasing the tendency of many brands to develop their marketing approach?
- Defining the concept of digital lightening fashion technique from a general perspective and what is the size of its impact on fashion marketing.

Objectives:

Examine the significance of various digital lighting fashion techniques in the context of interactive fashion marketing.

Importance:

- The importance of the research clarifies through achieving the positive impact of fashion marketing in the light of digital lightening fashion technique by studying its nature, types, how to activate it, deducing its components and areas of application.
- studying and analyzing the definition of digital lighting fashion and its techniques and realizing the necessity of using these new technology and novel concepts in fashion marketing.

Hypothesis:

The research supposes that:

- Employing digital lightening fashion technique helps in achieving the positive impact of the content of fashion marketing, making it more effective, customized, and successful.

- In the future, Developing the innovative side in smart textile techniques in fashion marketing will lead to improving the durability and sustainability of the materials used in this trend.

Methodology:

The research followed the descriptive approach through the theoretical framework and the analysis of some models to confirm the hypotheses of the research.

Theoretical Framework:

First: fashion marketing:

Definition and concept of fashion marketing:

1. Fashion definition:

Fashion definition is a difficult and time-consuming task, The term "fashion" comes from the Latin word "modus" which means:

- (a way of life, a set of conventions, a people's or group's culture), and it refers to a new and temporary acceptable way of living. When people talk about fashion, they usually mean a new manner of dressed; yet, fashion is a far more complicated term. Fashion encompasses not just new ways of dressing, but also lifestyle, behavior, literature, music, sport, design, art, architecture, and a variety of other topics. (Milica Slijepčević, 2016)

2. Marketing definition:

The foundational study "Marketing Myopia" by Theodore Levitt, published in the Harvard Business Review in 1960, promoted the premise that businesses would be more successful if they concentrated on discovering and addressing customer requirements, and from then marketing is known by "marketing philosophy," "total marketing," and "integrated marketing" (Barnes, Liz, 2013) ,so marketing can be defined as following:

- a business philosophy or way of thinking about a company from the customer's or potential customer's point of view, Such an approach has a lot of validity as it concentrates on the most important aspect of any business: meeting the demands of customers. If we don't meet their wants, we won't survive, much less prosper.
- a management process that focuses on predicting, identifying, and meeting client demands in order to achieve the organization's long-term objectives. While it is concerned with the organization's client interaction, it is also concerned with internal organizational issues that affect the achievement of marketing goals. (Easey, Mike, 2009)

3. fashion marketing definition:

It is conceivable to construct a larger picture of fashion marketing and define it thus if the

definitions of marketing and fashion marketing encompass what is known about marketing in the fashion business and add the distinctive qualities of fashion as discussed before, and fashion marketing is defined as:

- Fashion marketing is the use of a variety of tactics and a business mindset to accomplish the long-term goals of an organization by focusing on the consumer and potential customer of apparel and related products and services.
- Fashion marketing is concerned with comprehending the complex needs and wants of fashion consumers, as well as orienting both strategic and operational business activities to meet those demands. Fashion marketing's particular complexity as a business philosophy stems from the diversity of fashion-related influences that shape consumer needs, as well as the fast-paced pace of fashion-producers. (Easey, Mike, 2009)

4. Fashion marketing concept:

Historically, 'seasonality' has driven fashion in clothes, with people purchasing new fashion garments in accordance with the seasons, often autumn/winter and spring/summer. However, with the emergence of 'Fast Fashion' in the recent decade, fashion lifecycles have shrunk to as little as a few weeks, after which the fashion product becomes obsolete as a new set of fashion ranges becomes accessible. As consumers' demand for newness and the latest styles has grown, fast

fashion has become a strategic tool for fashion companies. One essential element of fashion clothes is the rising short-termism of consumer needs in regard to them, but another key feature of fashion garments is their versatility.

The fashion marketing notion is a different way of looking at the relationship between marketing and design. The idea that good fashion design merely needs enough promotion to flourish is only relevant to a small number of enterprises — mainly those producing high-end items for an affluent clientele. The alternative perspective of fashion design as a result of market research ignores the fact that many people do not know what they like until they are presented with options, and that their preferences vary over time. (Barnes, Liz, 2013)

The Fashion Marketing Mix:

The marketing mix notion would be a great tool for clarifying what marketing is and how its actions are interconnected, Many academics developed and simplified the marketing mix concept over time and it is still widely used in marketing education today, McCarthy referenced in (The 4P classification of the marketing mix revisited book published in 1992) who organized the constituents of the marketing mix into four classes: product, price, place, and promotion, dubbed the formula "The 4Ps," is the most enduring model of the marketing mix, The fashion marketing mix has some unique characteristics:



Fig (1): shows The Fashion Marketing Mix

• fashion product:

According to fashion product marketing theory, a product is "anything that can be offered to a market to satisfy a want or need," and it is made up of a core benefit, or what the customer is buying, bundled with a set of additional values, such as the "expected" product, or what the customer expects to get with a product, and the "augmented" product, or how the marketer exceeds expectations.

Fashion products are typically categorized into a set of categories not present in other marketing sectors, and are inextricably linked to the concept of fashion

having a short lifecycle.

• Fashion Promotion:

The concept of 'promotion' was developed from sales promotion in general marketing theory, i.e., informing consumers about a product.

All of the marketing communications mix's instruments are utilized in fashion marketing communications (or fashion promotion), however some are used more than others, and there are strategies used in fashion marketing that aren't employed in other industries. A characteristic feature of fashion promotion, for example, is the

utilization of fashion shows and catwalk collections to generate publicity and press.

What's more complicated is that, especially at the designer/luxury end of the market, catwalk shows are used to sell the brand and its whole range of branded mass market products such as cosmetics, sunglasses, and perfumes, rather than the garments.

• **Fashion Place:**

The distribution of products from where they are manufactured to where they are sold is referred to as 'place' in marketing jargon. The rise in importance of retailer-owned fashion companies such as Top Shop, The Gap, Zara, and H&M has been one of the fundamental elements of fashion-place marketing. In terms of fashion credentials, retailer own-brands like Ralph Lauren, Levis, and Lacoste are just as potent as designer- or wholesale-brands like Ralph Lauren, Levis, and Lacoste. The difference between brand and store has been dissolving and merging in the fashion industry over the last few years.

• **Fashion Price:**

Price is used to communicate the company's intended value-positioning of its product and to earn income. As previously said, fashion consumers are frequently convinced to pay relatively high costs for their products due to the perceived value they derive from them, such as in terms of design, fashion, or brand.

Factors Affecting Fashion Marketing:

- **Natural environment:**(renewable and non-renewable energy sources, minerals, fauna, and eco-system).
- **The economic climate:** (economic factors mostly affect the demand for fashion products, employment, purchasing power)
- **Social and cultural context:** (this segment is particularly important for the fashion market because cultural values and attitudes significantly affect the acquisition of habits of consumers and their decision when purchasing certain fashion brands and products)
- **The demographic situation:** (changes in education, gender, age structure of the population and trends in population changes)
- **Scientific and technical/technological environment:** (science as accumulated knowledge in the field of fashion industry and technology that applies the knowledge in practice, may lead to a completely new fashion products, enhancements and design improvements and the increased quality of the existing fashion products, new channels of distribution and communication activities that connect fashion companies with consumers directly)

- **Political and legal environment:** (major legislative action that provides the legal framework that protects the fashion market, fashion brands/companies from unfair competition, customers from unethical business practices, and the entire society from undesired corporate conduct. Regulatory activity refers to legislative restrictions that put fashion product manufacturers and customers on an equal footing, without favoring one over the other and equally honoring and defending their rights).

Elements of fashion marketing:

- **Consumers:** are the most significant aspect, as well as the greatest opportunity for fashion firms to grow and succeed on the market. Buyers of contemporary fashion items are generally well-informed and have higher expectations. Fashion is no longer only about pleasing the eye; fashion products must be of good quality, attractive, and functional, and they must reflect the buyer's personality, their business and lifestyle, and their philosophy. Regardless of the technical requirements of fashion products, ignoring the wants of consumers leads to a loss of market position.
- **Competition:** Rivals in the fashion market with products that appeal to the same or similar consumer groups. Competitors for the same category of items, competitors for substitutes, and competition for alternative products are the three primary categories of competition that fashion companies must contend with.
- **Suppliers:** firms that supply fashion services by converting raw materials into value during the manufacturing process. Cooperation with lower-cost suppliers can be critical in lowering operating expenses and delivering a more acceptable pricing for end users.
- **Intermediaries:** serve as a vital link between a fashion house and its current and prospective customers. They serve as a link between businesses and the fashion industry. Fashion product distribution or sales channels enable enterprises to reach out to ultimate consumers at the right time, in the right place, and in the right format. There are direct links.(Bhaduri, G., & Stanforth, 2016)

Terms to a successful fashion marketing:

There are many primary (and divergent) skills required in fashion marketing campaign to succeed:

- **The ability to predict the future:** The ability to predict fashion trends is an important aspect of this job. This necessitates a deep understanding of previous future trends, current future trends,

and an understanding of how an item's marketing contributes to these fashion trends. Furthermore, they must be able to stay ahead of these fashion trends in order to capitalize on them in a timely manner.

- Ability to think critically: Fashion merchandisers and marketers must be able to evaluate the financial aspects of their jobs. This requires them to stay informed about the overall economy, the economy of their respective companies, and how specific styles will fit within a consumer's budget. To ensure that they earn a profit for their employers, they must juggle a complex set of elements.
- Ability to communicate: In this sector, excellent communication skills are definitely necessary. They must be able to bargain with manufacturers about prices and sell their fashion choices to the general audience. They routinely compose advertising content, press releases, and even personalized letters to customers to achieve this goal. All of this necessitates advanced communication abilities. (National Council of Educational Research and Training, 2021)
- establishing internal dynamic skills as a source

of competitive advantage is critical.

- it is suggested that relationship fashion marketing be used. The importance of building long-term, solid connections with consumers and suppliers
- there's the matter of erecting protective walls, which can contain both static and dynamic capabilities.
- there's the question of specialty enterprises' expansion methods. (Kjell Toften, Trond Hammervo, 2013)

An example of a successful fashion marketing is Hermès' microsite, La Maison des Carrés, was set up to showcase its popular selection of scarves. Instead, if simply encouraging visitors to buy online, it aims to bring to life the history and artistry of the brand, with its beautiful design and superb attention to detail, it entices visitors to get lost in its world of illustration, despite that Hermès' website might come across as self-indulgent (and therefore off-putting to consumers), there's no denying that this part stands out for its creative and original approach.

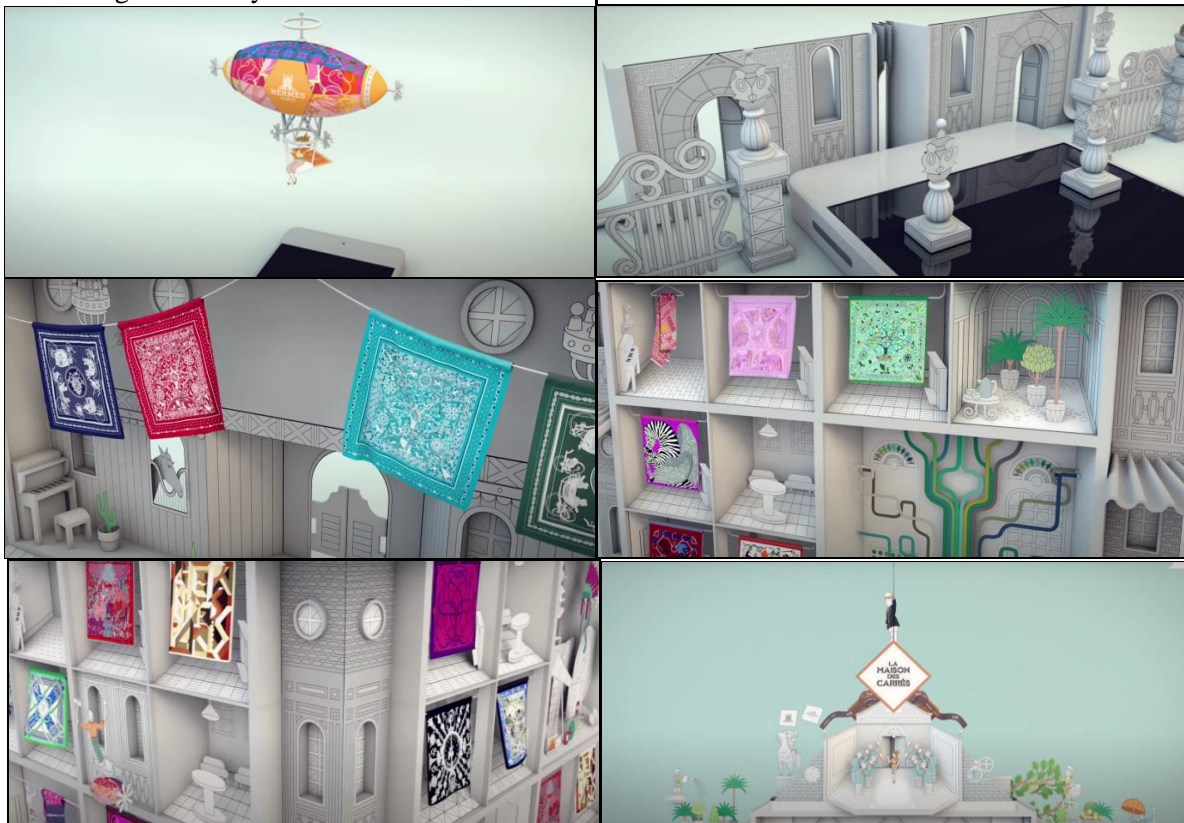


Fig (2): Hermès' microsite ad. (online: www.econsultancy.com/fashion-marketing-campaigns)

Market segmentation in fashion marketing:

Market can be segmented during fashion marketing campaign in various ways:

- Demographic Segmentation: Population, age, gender, occupation, education, and income are

all used to segment demographics.

- Geographic Segmentation: Cities, states, and regions are used to segment the geographical area. The environment of different locations varies, and it influences item selection,

particularly clothing.

- **Psychographic segmentation:** is based on lifestyle characteristics such as social activities, interests, leisure pursuits, demands, and desires. A target market group can consist of people with similar lifestyles.
- **Behavioral Segmentation:** is based on how people feel about certain items or services. Many times, users of products and services are rated, This aids in the improvement of the service/product and distinguishes it from the competition. (National Council of Educational Research and Training, 2021)

Fashion marketing strategy Considerations:

- the following points to be taken into account when identifying a fashion marketing strategy.
- realizing sustainable competitive advantages with products in specific markets.
- advantages must be based on long-term interests of customers.
- long-term interests can be transformed into

long-lasting relationships with different interest groups.

- taking initiatives to sustain relationships.
- An example explains the historical background of a brand and its power in affecting long term relation with the customers is Alongside Chanel News, Inside Chanel is a microsite dedicated to telling the story of the brand – a key part of its overarching Fashion marketing strategy, Separated into 12 chapters, each detailing an important part of the brand’s history, it offers something of real value for consumers, Combining photography, digital sketches and video – it uses rich content to bring the story to life. (Tevfik_Dalgic, Maarten_Leeuw, 1994), With 100 years of history, the in-depth and well-produced nature of the campaign also reflects the quality of the brand.



Fig (3): Inside Chanel ad explains the historical background of a brand and its power in affecting long term relation with the customers. (Online: www.econsultancy.com/fashion-marketing-campaigns).

Second: digital lightening fashion technique:

In the 1960s, the military sector, as well as the iron and steel industries, were among the first to adopt digital technology. Clothing is coupled to an interactive networking computer that may be controlled for usage in the steel industry. In 1998-1999, a full-scale development of digital fashion began. Clothing with inconspicuous digital IT gadgets began as a confluence, and as demand has

grown since 2003, it has become a part of our daily lives.

Through digital high technology, several light emitting mechanisms are available. EL (Electroluminescence), EL Wire, and Optical Fiber, LED (Light Emitting Diode) Iode, OLED (Organic Light Emitting Diodes: organic light emitting diode), flexible display, laser, and other light emitting digital technological principles It's called

"wonder light-emitting gadgets." (Heo Seungyeun, Lee Younhee, 2013)

digital lightening fashion technique types:

1- Electroluminescent dyes, wires, prints and panels:

This technique takes use of the fact that electroluminescent substrates, such as phosphors, emit light when subjected to a high frequency electric field. Panels and wire are the two most prevalent electroluminescent (EL) items. EL panels are made out of a foundation, which is usually a thin plastic sheet, with fine layers of inks printed on top to create the lamp. The base is first covered with a layer of conductive silver, then two dielectric layers, and finally the EL layer. The panel must next be covered with a second conductive layer, which must be transparent to allow light to pass through to the viewer (Emma Rowley, 2009).

Electroluminescent wire is a thin copper wire with

a phosphor coating that illuminates when exposed to an alternating current. The construction of EL Wire is made up of five basic components. The first is a phosphor-coated solid-copper wire core. The outer ITO conductive coating is evaporated on after a very small wire or pair of wires is spiral coiled around the phosphor-coated copper core (Anupam Bhatia, 2016).

To keep the voltage necessary to illuminate the panel as low as possible, these layers must be as thin as feasible; modern panels employ phosphors and dielectrics that are just a few micrometers thick. EL wires employ a similar layering of materials, however the dielectric and EL layers are applied directly to a copper wire rather of being printed onto silver-coated plastic. Both of these items are flexible, but not as soft as fabric (Emma Rowley, 2009)



Fig: (4) Electroluminescent wire (Anupam Bhatia, 2016).



Fig: (5) Electroluminescent wire fashion (<https://enlighted.com>)



Fig: (6) EL Wire Logos (<https://www.instructables.com>)

2- Optical Fiber

Long, thin strands of exceptionally pure glass make up fiber optics. Fibers are made up of a glass core around the diameter of a human hair that is surrounded by an optic cladding that reflects light back into the core and is all encased in a protective plastic covering. They are commonly used in telecoms to transfer light signals over very long distances. Fiber optic textiles have been studied since 1996, when the US Navy supported a project dubbed "Georgia Tech Wearable Motherboard" (Smart Shirt). In 2002, France Telecom announced

the development of a prototype of a flexible screen using fiber optic technology. For the first time, this breakthrough allowed clothing to function as graphical communication interfaces (Emirhan, K., 2005).

The optical fiber sensors measure the transmitted optical intensity loss, which may subsequently be utilized to create a simple and low-cost sensing system. The curvature of the fiber line, on the other hand, makes the transmitted light in multi-mode optical fiber easy to leak. (Yuya Koyama, Michiko Nishiyama, and Kazuhiro Watanabe, 2018).

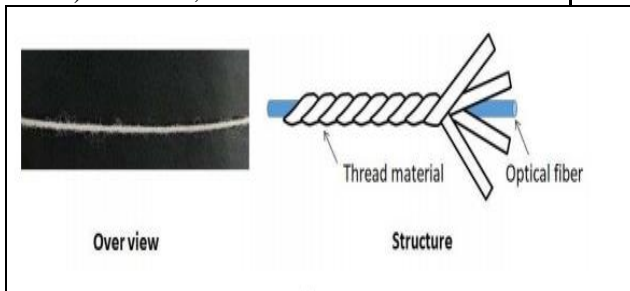


Fig: (7) Smart textile with optical fibers. (Yuya Koyama, Michiko Nishiyama, and Kazuhiro Watanabe, 2018)

3- LIGHT EMITTING DIODES:

When an appropriate electric current is sent from anode to cathode (forward bias), electrons

recombine with holes and release photons, a p-n junction diode built of doped semiconductors generates light. Because the wave length of



Fig: (8) optical fiber dress <https://m.alibaba.com>

produced photons is dependent on electroluminescence inorganic semi-conductor materials, we may alter the hue of the light generated by LEDs (Hafez N., Mohamed SH., Mustafa B.,2017).

Because of their low cost and widespread availability, LEDs have become popular among designers working in the fields of e-textiles and wearable technology. LEDs may be purchased from a variety of retailers in the UK and throughout the world, mostly through their online catalogues(Emma Rowley,2009).

One of the most frequently mentioned advantages of LED lighting is the devices' extended lifespan. A typical high-intensity LED has a useful life of 50,000 hours. Heat is directed away from the LED in an LED system via the mounting in the opposite direction of light output. This is useful in circumstances where it is undesirable to heat lit items (Thorseth A. , 2011).

LED lights are inexpensive in cost, compact in size, and come in a variety of colors. As a result, such electrical components may be employed to create

textile-based flexible displays that can show moving images or photographs (cocharane c.,meunier L., Killy F., Koncar V., 2011).

Because of their low cost and widespread availability, LEDs have become popular among designers working in the fields of e-textiles and wearable technology. LEDs may be purchased from a variety of retailers in the UK and throughout the world, mostly through their online catalogues(Emma Rowley,2009).

Philips and France Telecom, for example, have lately created their own technology and displayed clothing with dynamic displays that the user may regulate at whim. Lumalive is a Philips product that comprises of inorganic LED arrays installed on flexible substrates that are then slid into a pocket beneath the outer fabric. The use of surface materials to disperse the light from the LED array is what makes Lumalive so stunning, according to Martijn Krans, technical manager for the Philips Research Photonics Textiles group (cocharane c.,meunier L., Killy F., Koncar V., 2011).

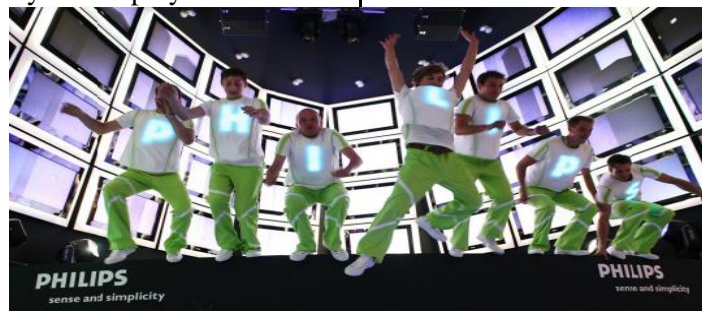


Fig (9): One of the many versatile applications of the Lumalive textiles (de Loose, W.R. 2010).

Lumalive was able to manufacture textiles with many LEDs implanted without sacrificing the fabric's softness or elasticity. Textiles allow people to express themselves in new and unexpected ways through apparel, The LED canvas may be worn below conventional clothing and emanates light through it (de Loose, W.R. 2010)

Lumalive in fashion:

Tomorrow's supermodels may walk the runways in clothing that enchant the audience like never

before, with colors and patterns shifting immediately to fit varied moods. Furthermore, because you'll be able to program your own colors and patterns into your garments, the possibilities for creative expression will be nearly endless. Dynamic ads, images, and continually changing colour surfaces may be presented on jackets featuring Philips Lumalive materials, as shown in fig ()(Harold P., 2006).



Fig (10): show jacket and T-shirt of Philips Lumalive (Harold P., 2006)

4- OLED & Flexible display:

OLEDs are solid-state devices that produce light when electricity is applied and are made up of thin films of organic molecules (small molecule OLED, SM-OLED or polymer OLED, P-OLED). In 1989, polymer OLEDs were developed.

OLED (organic light-emitting diode) integration into textiles Information displays have recently grown more essential since they form the outward element of the next generation of smart gadgets (<https://www.sciencedaily.com>)

The fabric that uses PLEDs is another step forward in revolutionary technology. PLED stands for polymer light emitting diode, a backlighting, illumination, and electronic display technology. A PLED display, unlike LEDs, which are miniature bulbs, is a thin, flexible polymer sheet capable of

displaying the whole color spectrum of light. A PLED is made up of many layers, including a plastic substrate, a transparent electrode coating on one side of the substrate, and a light emitting polymer film on the other, PLEDs are also known as OLEDs, or organic light emitting diodes, because the polymers in them are formed of organic molecules. PLED-displayed clothing is not currently available on the market, but it is possible that it will be in the near future (<https://www.technicaltextile.net>)

Wearable displays in the shape of clothes were once considered to be out of reach. The KAIST team, on the other hand, recently succeeded in inventing the world's most efficient, commercially viable light-emitting clothing (<https://www.sciencedaily.com>).



Fig (11): wearable flexible displays(<https://asia.nikkei.com>)



Fig (12): bag as a flexible displays (<https://www.hardwarezone.com>)



Fig (13): wearable flexible displays (<https://www.scmp.com>)

5- Laser:

Based on Chalayan's Mechanical Dress and his LED Dress fig (15), the laser dress evolved. Hundreds of servo motor-driven small laser diodes were employed. can produce light all the way down their length (laterally emitting fibers). They're then

linked to LEDs (hidden in the edging, around the fabric's perimeter, or in rails) that "inject" light into the fabric. Jacquard weave is also available for the lighting fabric. It's water-resistant and easy to clean (when not connected). (<http://www.hittech-light.com>)

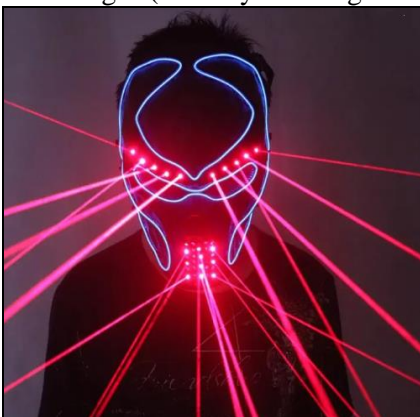


Fig (14): Laser man Face Mask (<https://thefashionique.com>)



Fig (15): Hussein Chalayan's Laser Dress in 2008 (<https://www.dezeen.com>)



Fig (16): laser shoulder man costume(<https://www.visual-star.com>)

Third: Creativity in fashion marketing:

In the fashion industry, creativity is not enough; other skills are required to support the development of new ideas and creations, as well as the acquisition of a consumer audience and market survival. Producers' constant risk of failure or bankruptcy can be reduced and made less certain by implementing quality and well-planned marketing

activities and maintaining continuous communication with the market and consumers. Every economic activity requires knowledge and application of marketing principles, but in the fashion industry, they are particularly important for identifying opportunities and avoiding failure. The fact that marketing is closely linked to creations and their market placement has been confirmed by

domestic and especially international experiences of fashion companies and brands, which, practically, leads to the conclusion that fashion marketing brings together the entire process - from product creation to consumers/customers and finally to making a profit.

Good knowledge of fashion marketing and all its performances makes a clear distinction between the models ending in warehouses and models which are desirable, which consumers will buy and wear.

Despite the fashion industry's evident importance in terms of exports and employment, fashion marketing continues to receive insufficient attention, and as a result, this subject is only intriguing as a market niche for specialists in this field. (Heine, K, 2010)

The constant change, i.e., fashion, necessitates the application of innovative design talents, resulting in a wide range of products ranging from the basic to the uncommon and sophisticated. The creative design workforce is an important aspect of the industry's response to the need for change.

At the same time, the sector requires the ability to

identify things that customers require and will purchase, Marketing can assist in providing this additional information and abilities, allowing organizations to prosper and expand by ensuring that the creative component is utilized to its full potential.

Light-emitting textiles have grown more versatile and user-friendly, These advancements have opened up a wide range of applications in the apparel, furniture, lighting, communication, and personal health care segments, in addition to being unique. The light emitting fabric was used more extensively in clothing for promotional events, stage (dance) fig.(17) ramp walks, workplaces (for safety and increased visibility), sports fig (18), and health-related activities. The audience might be mesmerized by future ramp models' kaleidoscope of colors and patterns. The use of LED clothing provides a significant benefit in terms of personal safety for night joggers and outdoor sportsmen. Runners' visibility in low-light situations (online:www.technicaltextile.net)

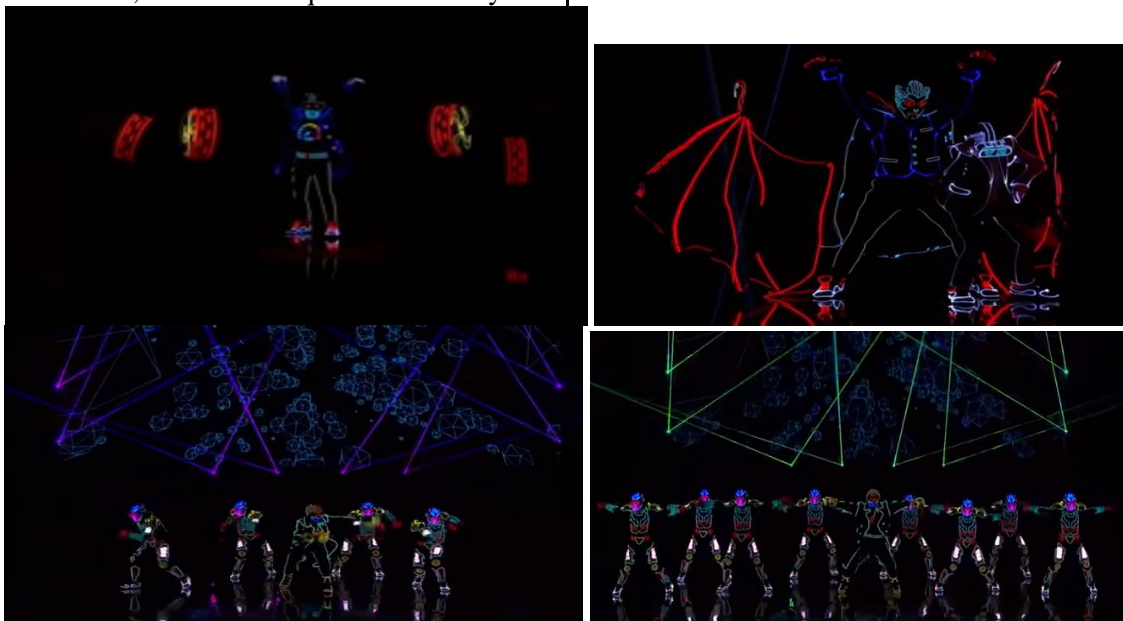


Fig (17): Light Balance FINALIST | ALL Performances America's Got Talent 2017. (Online: www.youtube.com)



Fig (18): Turn Signal Bike Jackets (online: www.makezine.com)

Smart technology's promise in clothing has yet to be fully realized. In terms of integrating science and art, the most important necessity is transdisciplinary harmonization rather than compromised collaboration. As a result, not only the technology's functioning, but also the design's aesthetics, must be taken into account. The goal of design/technology is to investigate both the scientific and artistic aspects of the subject at the same time. As a result, a new type of smart clothes is introduced. (Olfat Mansour, Rasha Ibrahim,

2018)

Lighting is being incorporated into the goods of an increasing number of fashion designers and garment producers fig.(19). Some designers utilize light to convey and visualize a wide range of concepts to customers, while others merely aim to keep them safe. To light up clothes, there are three generally utilized approaches. Fiber optics, electroluminescent yarns, and LEDs with conductive threads are all examples(Emma Rowley,2010).



Fig (19): Digital Pixel Aurora LED dress with wireless control Smart ultra-bright LEDs of 6th generation. (Online: www.led-clothing.com)

The use of LED clothing provides a significant benefit in terms of personal safety for night joggers and outdoor sportsmen. Runners' visibility in low light and at night is a safety problem, which is addressed by a variety of reflective add-on strips, jackets, and shoes. These materials might also help the advertising business by allowing them to show

information or logos fig (20). Text and multi-media marketing might take on a whole new level if clothing with the names of famous music or sports players is worn, They will also provide the performing arts a new creative dimension (<https://www.technicaltextile.net>).

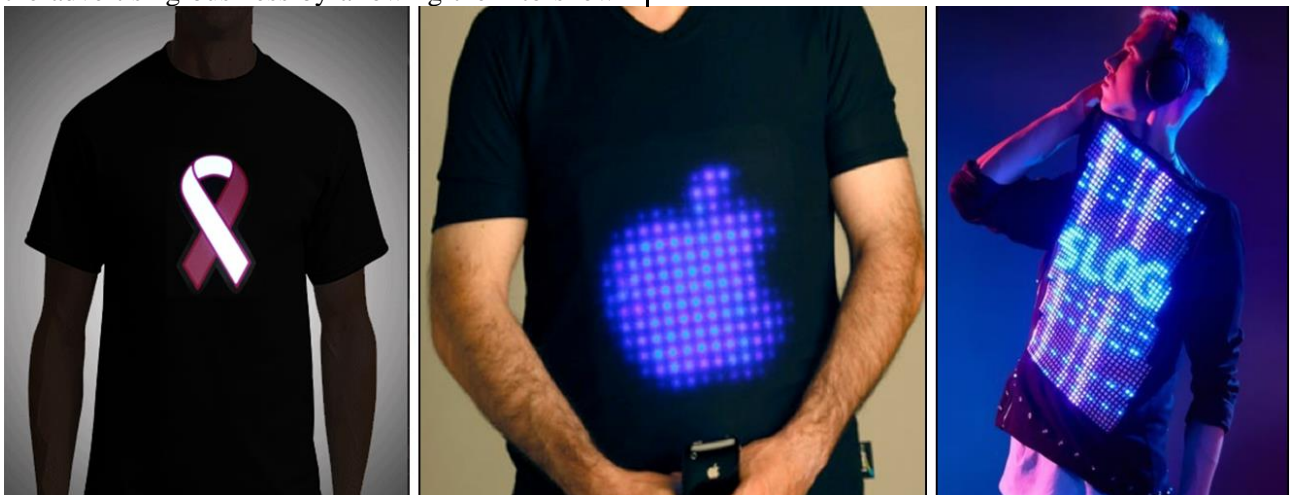


Fig: (20) different uses of digital lighting clothes in advertising (www.pinterest.com)

Digital technology has had a significant impact on the way textile designs are produced and developed. As designers embrace digital pattern creating and its palette of prepared effects, overlays of gradients and colors, whorls of patterns never before imaginable are becoming more frequent. Alina Ene, a Romanian fashion designer, merges analogue and digital to produce 3D printed clothing that illuminate in the dark. Ene designs sculpted clothing in vibrant and abstract photographic prints

using long exposure photography methods fig (21). To bring the fabric to life, she worked with Romanian photographer Dan-Andrei Paraschiv. Her clothes come to life at night when exposed to UV light. Her outfits truly come to life at night, when the designs begin to sparkle brightly under UV light on the dance floor. My particular favorite feature is the shimmering ruffles. Fiber optic lights is used in a handful of the clothes in her collection. (Online: fashioningtech.com)



Fig (21): the new wave of 3d printed garments. (Online: www.fashioningtech.com)

Analytical study:

Through the theoretical study, the researchers conducted an analytical study of a set of models to

conclude how digital lightening fashion techniques are used and these models are:

First Analytical Model:



Fig

(22): El wire light-up Nike sneakers(Online: www.led-clothing.com)

Designer (design owner)	LED Clothing Studio Inc.
Date /place	2006/South Korea
Target group	youth
Type of technique	<u>Name:</u> El wire <u>Description:</u> El wire clothing that is perfect for entertaining crowds and <u>dancing shows</u> at night clubs and night parties. Best results are achieved if smoke machine is used.
Idea	Nike has the ability to influence the attention of the recipient by producing shoes that feature wire light up technology to encourage the target group of young people, increase sales, and help the marketing strategy thrive.

second Analytical Model:

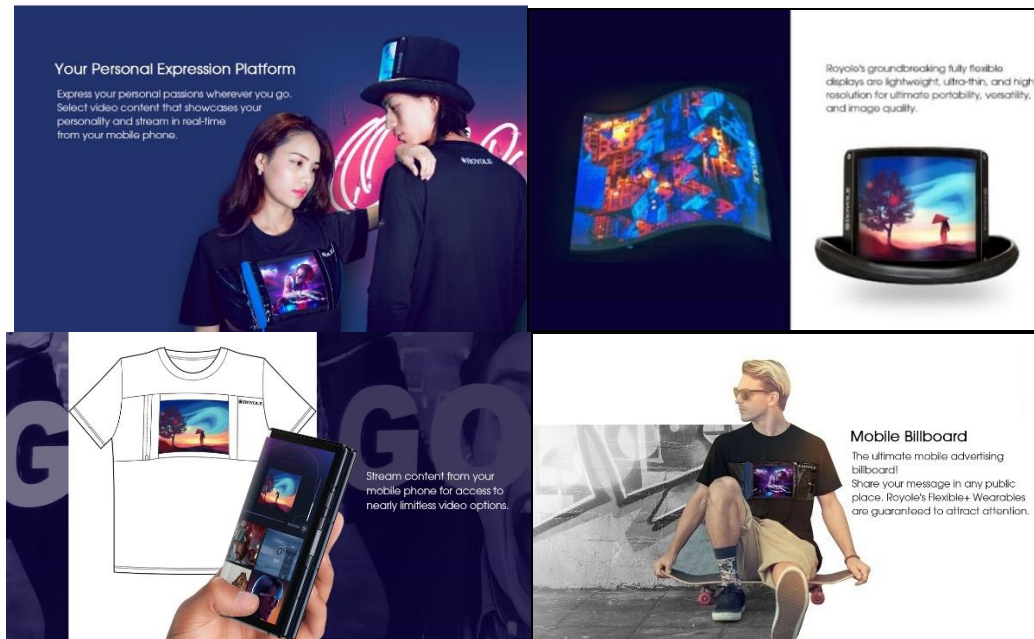


Fig (23): flexible wearables combo. (Online: www.global.royole.com)

Designer (design owner)	Royole corporation
Date /place	2012/California, Shenzhen, Beijing, Hong Kong , the Netherlands and Japan.
Target group	Youth.
Type of technique	<u>Name:</u> OLED & Flexible display <u>Description:</u> flexible display are lightweight, bendable, and roll able, delivering unique functionality and improved user experiences. The flexible display features 2k resolution and high color saturation for stunning image clarity and quality.
Idea	flexible wearables combo products are displayed into traditional, stylish shirts and hats, in a unique way to help users express themselves, in addition to the ability of using this technique in ultimate mobile advertising billboards to give advertising agents to share the message in public easily which gives competitive advantages to advertisers.

Third Analytical Model:



Fig (24): Adults Unisex Interactive Green Glow T Shirt in Black (Online: www.notonthehighstreet.com)

Designer (design owner)	Illuminated Apparel
Date /place	Britain
Target group	youth
Type of technique	<u>Name:</u> Lumalive /LIGHT EMITTING DIODES(LED) <u>Description:</u> Interactive Glow T-shirt in which you can customize

	<p>with light</p> <ul style="list-style-type: none"> - Using the included Glow Pen included, or a mobile phone torch you can create your own designs on the clothing - again and again. - The glow effect lasts between 5-10 minutes, before fading away completely. This means you can keep interacting with the t-shirt throughout your day or night. - The T-shirts are machine washable, perfect for when you come back from a festival or a children's party. As they are 100% cotton, they feel great to wear due to the natural fibers. Each T-shirt includes a Glow Pen, allowing you to charge up the glow canvas. You can also create cool shadow effects from a distance
<p>Idea</p>	<p>Interactive Glow T-shirt in can customize any message with light, and it gives the recipient the ability to express himself freely, fluently and easily through writing and drawing with light, which helps to attract attention and increase the effectiveness of the advertising message due to its privacy and proximity to the identity of the recipient.</p>

fourth Analytical Model:

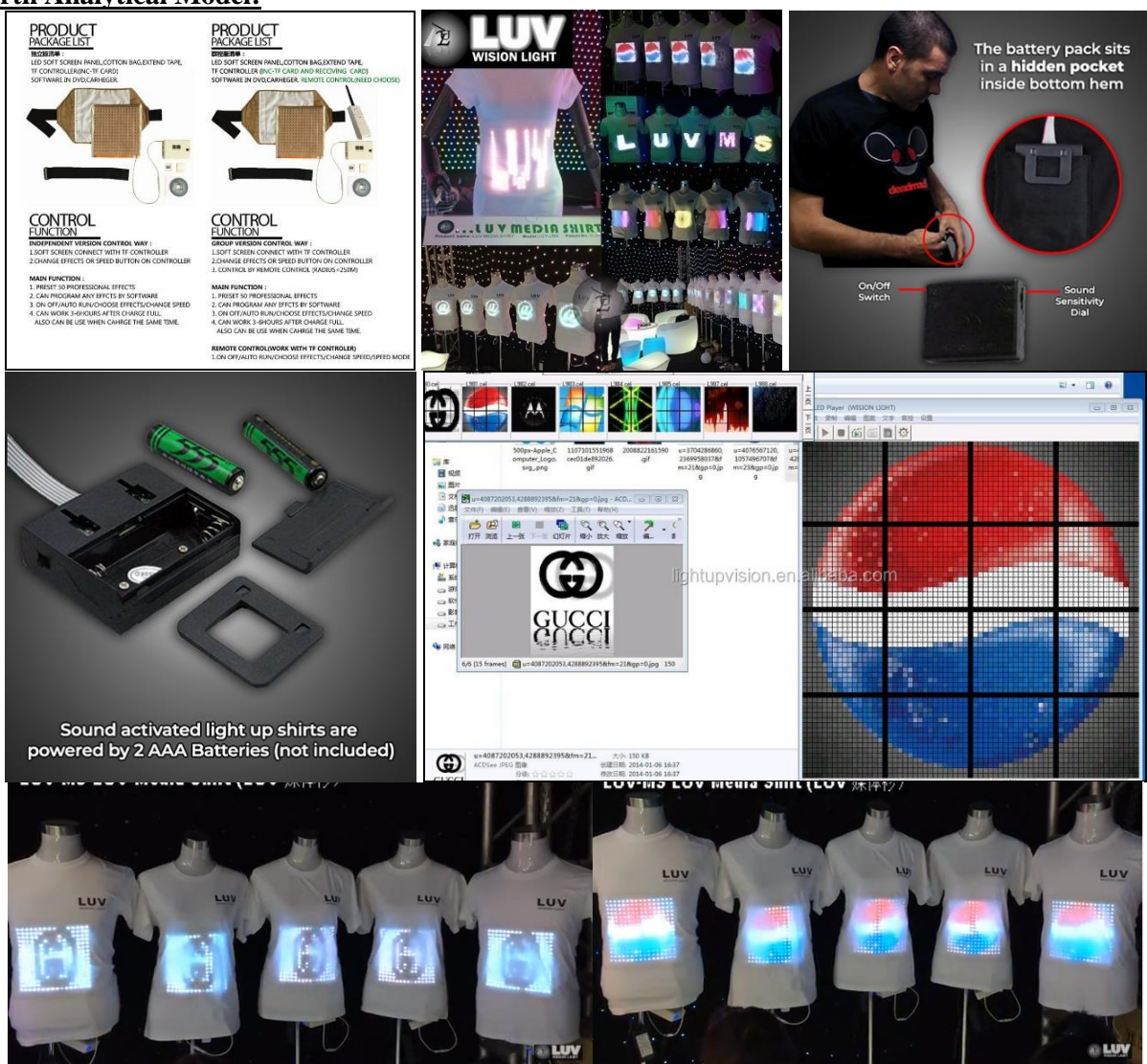


Fig (25): led cloths (Online: www.notonthehighstreet.com)

<p>Designer (design owner)</p>	<p>Guangzhou Wision Light Equipment Co. Ltd</p>
<p>Date /place</p>	<p>China</p>
<p>Target group</p>	<p>All genders and ages.</p>
	<p>Name: Lumalive /LIGHT EMITTING DIODES(LED</p>

Type of technique	<u>Description</u> :- cool animated product advertising indoor el product - 2.5mm thin, soft wearable - Programmable with any logo, text, picture or video
Idea	Lumalive technology has the ability to display any possible advertising message on the screen connected internally to the clothes which speeded since 2008, and can be used in advertising and promotion for many brands, and is characterized by the ability to display the message in different colors or neutral colors and can be divided on more than one adjacent display, to serve the purpose of the advertising message in addition to its ability to attract attention and provoke the interest of the recipient.

fifth Analytical Model:



Fig (26): rami kadi fashion show. (Online: <https://en.vogue.me>)

Designer (design owner)	Rami Kadi fall couture collection 2015
Date /place	PARIS 2015 FALL COUTURE
Target group	Women
Type of technique	Name: Lighting threads
	- Kadi braided threads to recreate the insects' shape on long and regal A-shaped dresses covered in lace, mimicking a spider's web. - Kadi conjured various patterns on black-and-white numbers, including festive minidresses with built-in capes or trains lined with ostrich feathers. When he turned off the lights at the salon of the Plaza Athene, the dresses look let off a warm glow.
Idea	The designer launched his new collection, which was decorated with a luminous firefly insect, inspired by this "natural lighting technology", modern and innovative techniques that he applied in all his designs, and depicted this insect on most dresses, but in beautiful and different forms. The dresses varied between long and short, while the fabrics were varied. Organza, silk, fur, feathers, wool and other luxurious materials that suit the modern woman looking for distinction and difference.

Conclusion:

The world market for textiles underwent significant and major changes in the last decades of the previous century and the first decade of this century: distant markets were opened, production increased, the exchange of goods and services in the textile industry and garment production expanded, and the textile industry's share of total world trade increased. While fashion and technology work to redefine, social inscriptions driven by trends as well as personal expression,

fashion choices currently strike a careful balance between individuality and uniformity, "Within society, fashion is negotiated on a communicative basis... via use of fashion marketing. Marketing through creativity the use of fashion results in a special and unique product that draws closer to young consumers in an attractive way. According to this, this study relied on: First, the analysis of the fashion marketing method, the definition of digital lighting fashion technology, and how to achieve creativity by merging the two elements to serve the consumer.

Secondly, an analysis and classification of a group of five designs that represent more than one type of diversified digital fashion techniques, the target audience, and their role in fashion marketing.

Despite the author's best efforts to present a diverse range of inventive and innovative initiatives, this study is only able to scrape the surface of the work that is being done in this sector. As a result, this paper serves as a beginning point for demonstrating the inventiveness and obstacles that fashion designers and others in the field of fashion marketing encounter, in addition to this article demonstrates the need of tight communication and cooperation amongst professionals in various domains.

Results:

- The inherent essence of fashion, which is characterized by constant change, places a different emphasis on marketing operations. Furthermore, the function of design in both influencing and influencing consumer demand leads to a number of fashion marketing strategies.
- The method used to apply the components of marketing mix differs between industries. The fashion industry is no exception, and each component has its own characteristics in the context of fashion. Although the term "fashion" has a wide range of meanings, it is commonly used in reference to clothing and accessories, where it indicates a style prevailing at a specific period in time.
- Fashion Marketing can assist in providing additional information and abilities, allowing organizations to prosper and expand by ensuring that the creative component is utilized to its full potential.
- There are numerous advancements in the field of smart textiles that assist the designer in developing and enriching the worldwide market with fresh and diverse ideas.
- digital lighting fashion is global trend as type of smart textile, it can be used as a new approach to marketing aimed at attracting customers, particularly young people.

Recommendations:

- The necessity of keeping up with the digital lightening fashion technique and trying to apply it in the fields of advertising and marketing.
- Institutions must pay attention to fashion marketing and realize its effectiveness in influencing and employing it to obtain positive results and create a positive mental image for the target group.

- Encouraging more research and studies on the effectiveness of digital lightening fashion technique, as it is a relatively new, which is expected to increase its employment in the future due to the stability of its effectiveness and ability to influence the recipient.
- Maintaining a worldwide trend toward sustainability and creative fashion.

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