

Study of graphic and interactive design Criteria for websites

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Abstract

Digital technology has witnessed rapid progress that exceeds any innovation the world has witnessed. More than 99% of the information in the world is now stored, traded, and dealt within a digital format that facilitates access to it. From an economical and commercial perspective, marketing, advertising and publicity methods have changed, and customers can now carry out all operations such as buying, selling, etc... Through companies' websites with ease, thus the digital transformation of all transactions has become a basic requirement for any society seeking development, advancement and progress.

A good website in terms of structural, graphic and interactive design is one of the basic tools for the successful digital transformation of any institution, commercial, industrial or service activity related to the public, as the success of the website helps support the identity of institutions and achieve their goals and mission, **as well as achieve the goals of sustainable development** and quality of life for any society.

The current reality of Arabic website design witnesses an overlap in roles between graphic and multimedia designers and websites developers including computer and information science engineers and others, where the role of graphic designers is ignored in the design of some websites. **The research problem lies** in discussing this existing situation through a set of questions that will be answered through the research steps, namely: What is the role of graphic designers in website design? Does website design require specializations and teams that cover different aspects of the design process? Are there considerations for the structural, graphic and interactive design of websites that must be achieved? Are there considerations and requirements for user interface design that must be considered? Are there considerations for user experience design that must be considered when designing websites?

Good website design improves the user experience and makes it easier and more convenient to achieve user satisfaction, as well as supporting competition in developing products and services that meet the needs of customers in more efficient ways, a good example of this is what happens in the field of e-commerce as a result of successful digital transformation where services are provided and products are sold through websites and customers can browse and buy products, **hence the importance of the research appears** in applying scientific and technical standards when designing websites to be characterized by structural, aesthetic and interactive design that achieves the best interface and user experience to support competition in various fields.

The research aims to identify the most important foundations and principles that must be considered when designing websites and create a scientific guide that addresses the most important scientific and aesthetic considerations and standards to improve the specifications and quality of websites, and support the work of the community or integrated team of designers and IT specialists in the same project according to the general trend of companies that produce

web design tools and programs that adopt the existence of a work team called the design community or a work team that everyone works in the same project in each specialty, which is called Community, such as Figma. The researcher follows the descriptive and analytical approach.

Keywords

Websites design, user interface, user experience, digital transformation, Figma Community.

المخلص

شهدت التكنولوجيا الرقمية تقدم سريع يفوق أى إبتكار شهده العالم فأكثر من ٩٩% من المعلومات على مستوى العالم أصبحت تخزن ويتم تداولها والتعامل معها بصيغة رقمية تسهل الوصول إليها، ومن الناحية الاقتصادية والتجارية تغيرت أساليب التسويق والدعاية والإعلان وأصبح بإمكان العملاء القيام بجميع العمليات مثل الشراء والبيع وغيرها من خلال المواقع الإلكترونية للشركات بكل سهولة وبالتالي أصبح التحول الرقمية لجميع المعاملات مطلب اساسى لأي مجتمع يسعى إلى التنمية والتطور والتقدم. والموقع الإلكتروني الجيد من حيث التصميم البنائي والجرافيكي والتفاعلى من الأدوات الأساسية للتحول الرقمية الناجح لأي مؤسسة أو نشاط تجارى أو صناعي أو خدمي مرتبط بالجمهور، فنجاح الموقع يساعد في دعم هوية المؤسسات وتحقيق أهدافها ورسالتها فضلاً عن تحقيق أهداف التنمية المستدامة وجودة الحياة لأي مجتمع. ويشهد الواقع الحالى لتصميم المواقع الإلكترونية العربية تداخل في الأدوار بين مصممي الجرافيك والوسائط المتعددة ومطوري المواقع من مهندسي علوم الحاسبات والمعلومات وغيرهم حيث يتم تجاهل دور مصممي الجرافيك في تصميم بعض المواقع الإلكترونية، وتكمن مشكلة البحث في مناقشة هذا الوضع القائم من خلال مجموعة من التساؤلات المطروحة والتي يتم الإجابة عنها من خلال خطوات البحث ألا وهي: ما هو دور مصممي الجرافيك في تصميم الموقع؟ وهل يتطلب تصميم المواقع الإلكترونية تخصصات وفرق تغطي الجوانب المختلفة لعملية التصميم؟ وهل هناك إعتبارات للتصميم البنائي والجرافيكي والتفاعلي للمواقع يجب تحقيقها؟ وهل هناك إعتبارات ومتطلبات لتصميم واجهة المستخدم يجب مراعاتها؟ وهل هناك إعتبارات لتصميم تجربة المستخدم يجب أن تأخذ بعين الإعتبار عند تصميم المواقع الإلكترونية؟ والتصميم الجيد للمواقع الإلكترونية يحسن تجربة المستخدم ويجعلها أكثر سهولة وملائمة لتحقيق رضاه فضلاً عن دعمه للتنافس في تطوير المنتجات والخدمات التي تلبي إحتياجات العملاء بطرق أكثر كفاءة، وخير مثال على ذلك ما يحدث في مجال التجارة الإلكترونية كنتيجة للتحول الرقمي الناجح حيث يتم تقديم الخدمات وتباع المنتجات عبر المواقع الإلكترونية ويمكن للعملاء تصفح المنتجات وشراؤها، من هنا تظهر أهمية البحث في تطبيق المعايير العلمية والفنية عند تصميم المواقع الإلكترونية لنتميز بالتصميم البنائي والجمالي والتفاعلي الذي يحقق أفضل واجهة وتجربة مستخدم لدعم التنافس في شتى المجالات. ويهدف البحث إلى التعرف على أهم الأسس والمبادئ التي يجب مراعاتها عند تصميم المواقع الإلكترونية وعمل دليل علمي يتناول أهم الإعتبارات والمعايير العلمية والجمالية لتحسين مواصفات وجودة المواقع الإلكترونية، ودعم العمل بأسلوب الـ Community أو الفريق المتكامل من المصممين والمتخصصين في تكنولوجيا المعلومات في نفس المشروع طبقاً للإتجاه العام للشركات التي تنتج أدوات وبرامج تصميم المواقع والتي تتبنى وجود فريق عمل يطلق عليه مجتمع التصميم أو فريق عمل يعمل الجميع في نفس المشروع كل في تخصصه وهو ما يطلق عليه Community مثل شركة فيجما Figma، ويتبع الباحث المنهج الوصفي والتحليلي.

تصميم المواقع الإلكترونية، واجهة المستخدم، تجربة المستخدم، التحول الرقمي، مجتمع فيجما.

Introduction

Website design is essential for any activity and it is a science that combines graphic design, computer and information science, UI and UX design techniques to create a design that achieves good organization of information and its classification clearly, and ease of use with taking into account the achievement of the quality of the user experience (UX) while emphasizing the aesthetic aspect with full support for the visual identity, and this is done by a team of website designers, developers and others as they play a vital role in the process of designing, developing and maintaining the website. Graphic design plays a pivotal role in elevating the brand and achieving the right balance between the beauty of the website and the quality of the user experience to take the required action. Good graphic design increases the attractiveness and value of the brand, with ease of use and communication of ideas while stimulating the aesthetic senses of the user and increasing the sense of association with the brand of the website.

In this research, we will address the principles of web design from an aesthetic, graphical and interactive point of view, the most important skills that the designer must possess, as well as a study of the considerations that must be available for website design.

Research problem

The research problem lies in discussing the current situation in website design in an attempt to answer the following questions:

- 1- What is the role of graphic designers in website design?
- 2- Does website design require specializations and teams that cover different aspects of the design process?
- 3- Are there considerations for the structural, graphic and interactive design of websites that must be achieved?
- 4- Are there considerations and requirements for user interface design that must be considered?
- 5- Are there considerations for user experience design that must be considered when designing websites?

Importance of the research

Good website design improves the user experience and makes it easier and more convenient to achieve user satisfaction, as well as supporting competition in developing products and services that meet the needs of customers in more efficient ways, a good example of this is what happens in the field of e-commerce as a result of successful digital transformation where services are provided and products are sold through websites and customers can browse and buy products, hence the importance of the research appears in applying scientific and technical standards when designing websites to be characterized by structural, aesthetic and interactive design that achieves the best interface and user experience to support competition in various fields.

Research objective

- 1- Identify the most important foundations and principles that must be taken into account when designing websites.
- 2- Create a scientific guide that addresses the most important scientific and aesthetic considerations and standards to improve the specifications and quality of websites.
- 3- Supporting work in the community style or the integrated team of designers and IT specialists in the same project according to the general trend of companies - such as Figma - which produces website design tools and programs which adopts the existence of a work team called the design community where everyone works on the same project, each in his own specialization.

Research Methodology

The researcher follows the descriptive analytical approach by collecting data and information about the research topic, then classifying and analyzing this data and reaching results.

Firstly: website designer qualifications

Website design combines science, art and creativity, so there must be joint cooperation and a team of designers and developers, each in his field, to create, design and coordinate the website content of texts, images, drawings, graphics and videos...etc., in addition to managing and publishing the website, but website developers from computer and information science engineers and others may dominate, and the role of graphic designers in designing websites is ignored. Therefore, in this section we will discuss the most important requirements and skills that must be available in those responsible for creating websites:

- 1- Education: It is preferable for website designers and developers to have a bachelor's degree in graphic design to cover the technical and creative part of the website, and developers to have a bachelor's degree in computer science to cover programming. The website designer must have studied interactive media design related to website design, as the study includes graphic design, photography, video, animation, digital writing, an introduction to media and its ethics.
- 2- A good student of the basics of art and design, color theories and typography to deal thoughtfully with fonts, writings and titles, in addition to a good understanding of the art of composition, harmony, contrast and arrangement of various design elements from texts, images and drawings, i.e. familiar with the scientific, practical and aesthetic aspects of designing a creative website in terms of the user interface and experience.
- 3- Mastering graphic design programs specialized in website design and compatible with industry standards such as: Adobe Photoshop · Adobe Illustrator· Adobe InDesign· Figma, Sketch ... etc.
- 4- Developers must have knowledge of front-end programming languages. Among the skills required for website design is learning some of the programming languages required to operate the website and achieve a good user experience with an elegant interface and the ability to navigate and browse, such as: CSS, HTML, JavaScript, jQuery. Therefore, the researcher emphasizes the importance of designing websites through an integrated team of graphic and multimedia designers, in addition to website developers from computer science and information engineers.

5- Interpersonal skills and teamwork; Website design and development is a long process that requires full coordination and communication between designers of the user interface and user experience and cooperation with clients and other experts such as copywriters, developers, marketing professionals, etc....

6- Continuous education and development to acquire new skills, techniques and programs, as website design evolves with the change in information technology.

7- Studying programs, concepts and technological terms related to website design, such as: Content Management Systems (CMS) used by website developers, Search Engine Optimization (SEO) to improve the site's ranking in search engine results, social media... etc...

8- Follow up on the latest market requirements and trends to ensure that the website meets all current market standards while following the trends and guidelines of visual identity and technical skills that every professional website design expert should possess.

9- Ability to analyze and evaluate data Appreciation for data and analytics to make more informed decisions when designing or updating in the future.

Secondly: The Anatomy of a Website

There are basic elements and components for any website, which are as follows:

1- Website header

The header design should be concise, well-organized, easy to read, and contain the logo, links to pages, CTA buttons, Hamburger Menu, login and logout buttons, search, and language selection. The header design on the inner page should be a shortened version of the home page header.

2- Website Navigation

The navigation menu is one of the most important elements of website design as it helps the user access the content he needs, Figure No. (1).

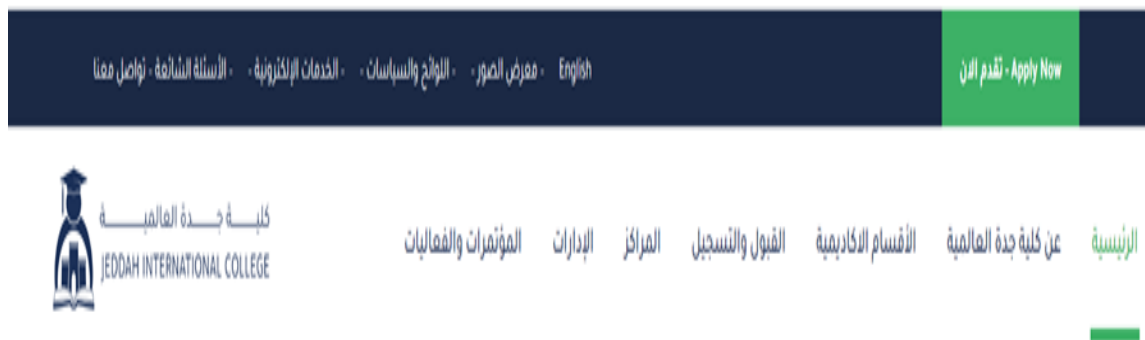


Figure No. (1) Website header & Navigation Menu

3- Website content

The website content includes multiple elements such as: Texts, images, graphics, videos, buttons, forms or any other element that needs to be added.

4- Website Footer

It appears at the bottom when you scroll down the page and usually includes the website logo, contact details, copyright notice, social media icons, and a website map, Figure No. (2).

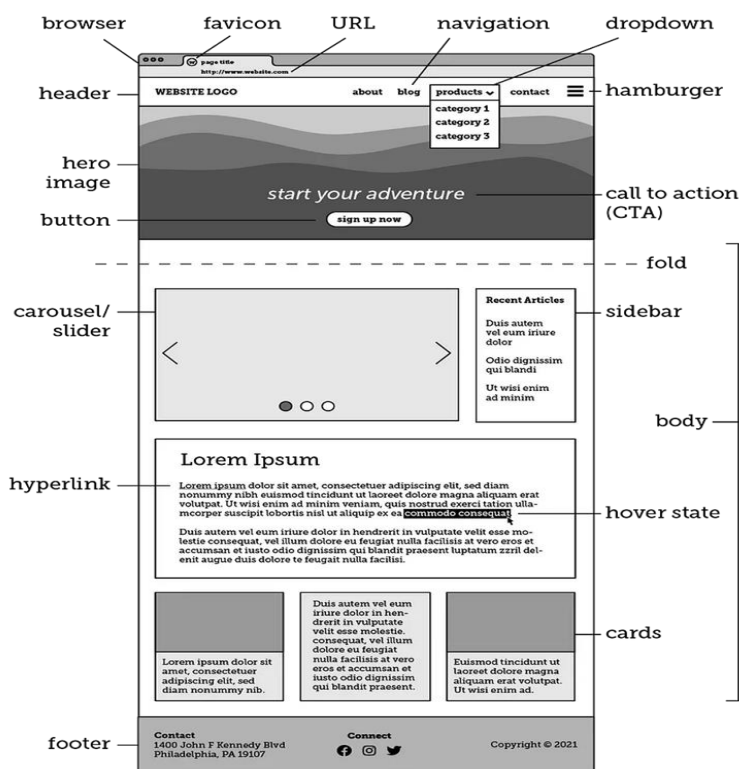


Figure No. (2) The Anatomy of a Website (28)

Thirdly: Website design steps

- 1- Creating a website begins with defining the vision and goal for which the website was created, defining the target audience, and the actions required of the user when visiting the website.
- 2- Research and inspiration: Extensive research is conducted before starting to design the website for visual nutrition and to identify the latest trends in the field that the website is talking about, as well as to identify competitors' websites.
3. Create a wireframe, which is a visual guide that represents the structure of the website or a draft of the site layout to determine the placement of key elements and focus points such as navigation menus, content sections, Call-To-Action (CTA) buttons, and any interactive elements, and design the site journey map, Figure No. (3).

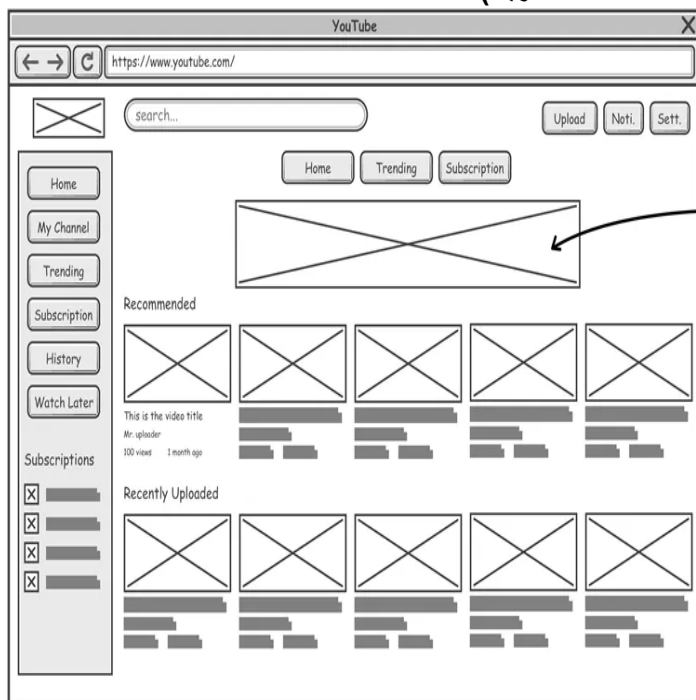


Figure No. (3) Website wireframe (12)

4- Engineering and organizing information in an easy-to-use way, such as presenting some information in the form of illustrative charts or interactive elements to convey information more quickly.

5- Designing the website pages from texts, images, videos, buttons, and using fonts, titles, and colors that suit the website’s identity.

6- Navigation design, Figure No. (4).

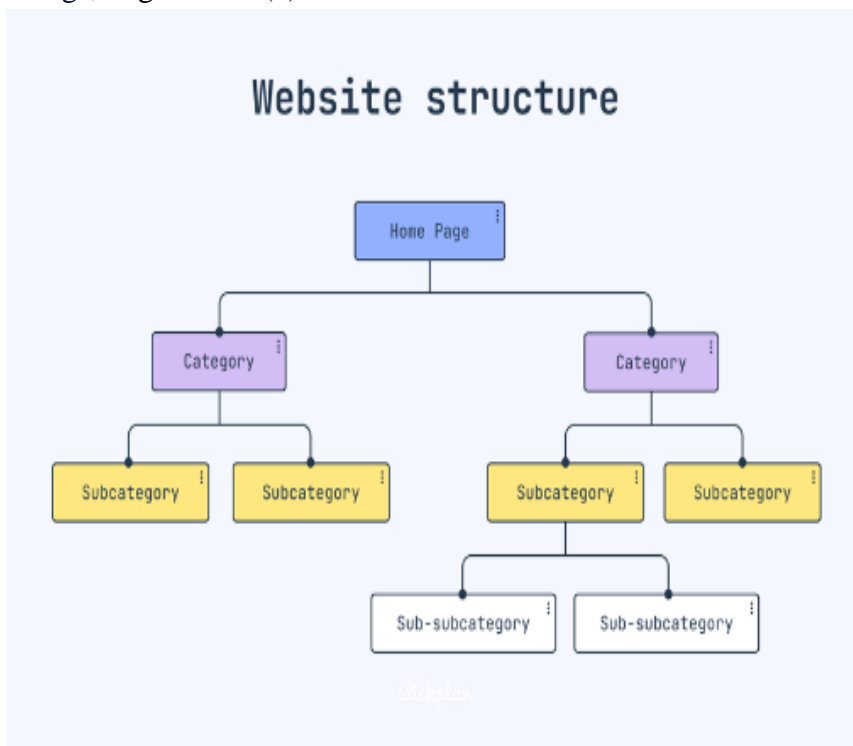


Figure No. (4) Site Journey Map (45)

7- Iterate and test and measure the performance of the website with real designers and collect their feedback.

8- Choosing Color Scheme: Choosing colors is very important when designing a website and distinguishing it from competing websites and making it instantly recognizable, considering the color connotation of each color used to express the nature of the website, its message and achieve its goal. It is recommended to choose one dominant color with two or three secondary colors to complete the palette, in addition to drawing inspiration from some sites such as Pantone and finding a balance between the font shape and readable content, Figure No. (5).



Figure No. (5) Stages of website design

Fourthly: website layout

Each website has a unique layout, content hierarchy, and clear navigation path from one page to another, applying the alignment principle and organizing white spaces with a focus on elements, colors, graphics, fonts, and their arrangement. The task of this work is assigned to graphic designers, as there are different coordination methods that combine science and art by following some guidelines that help in building the structure of the site in a good and attractive way. The following are some of these methods:

1- Three Boxes Layout

This format is based on the presence of three different spaces of rectangles and squares, one main, and then two smaller spaces below it so that any content can be added within these spaces, whether texts, images or video clips, and the upper main rectangle is a jQuery slider with more content, and the logo, company name, navigation menus and search bar can be added to the top of the site, Figure No. (6).



Figure No. (6) Three Boxes Layout

2- Five Boxes Layout

This layout contains five spaces, a large main rectangle and four spaces below it according to the content, and this layout is suitable for blogs and portfolio websites, and it is an evolution of the three-box layout, as it accommodates more content and is versatile and can be four boxes as well, Figure No. (7).

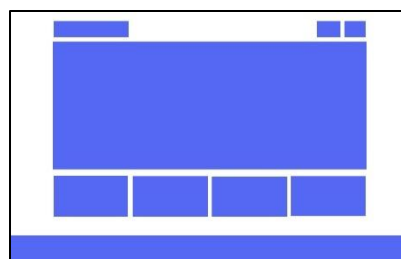


Figure No. (7) Five Boxes Layout

3- 3D Screenshot Layout

One of the most common layouts for a website home page is a 3D slideshow with the main title at the top of the page and some images with heavy reflections or shadows, large background graphics or a 3D image slider, Figure No. (8).

4- Featured Graphic Layout

This layout is characterized by simplicity and is suitable for commercial websites that want to display their best products prominently, and it is one of the modern trends used in the design of the homepage of companies and products that do not contain many images, so one image is displayed, Figure No. (9).



Figure No. (8) 3D Screenshots Layout

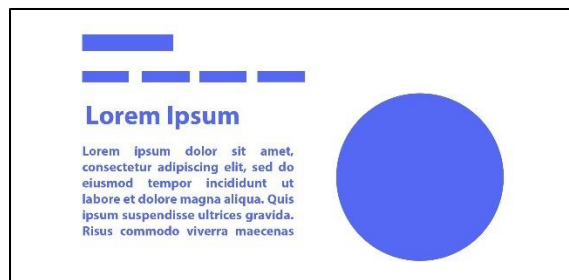


Figure No. (9) Featured Graphic Layout

5- Advanced Grid Layout

This layout applies the principle of alignment with different sizes of spaces, the left part has a different size than the right part, and the spaces may contain images, text, video or a combination of text and images, Figure No. (10).

6- Fixed Sidebar Layout

This layout relies on the use of a fixed vertical side navigation menu with the rest of the page elements moving, and can be mixed with three or four box layouts and is suitable for portfolio website designs, Figure No. (11).

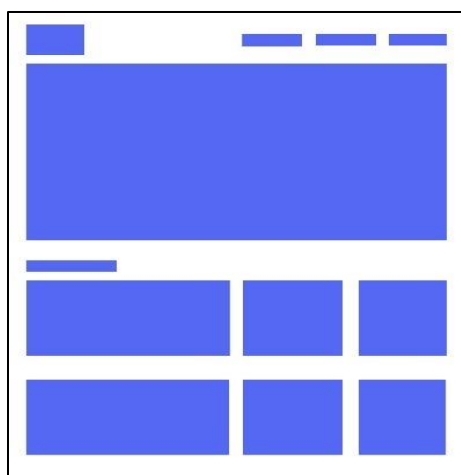


Figure No. (10) Advanced Grid Layout

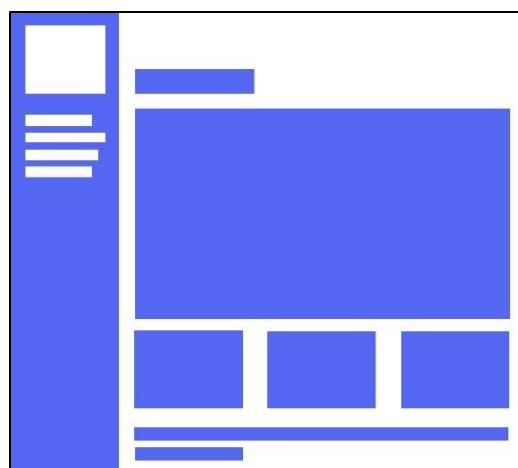


Figure No. (11) Fixed Sidebar Layout

7- Headline & Gallery Layout

This layout is suitable for designing websites for design agencies and photographers that require photo galleries and artwork, as it relies on a unified grid of images with a space at the top for the headline, and squares, rectangles or circles can be used for the gallery content, Figure No. (12).

8- Featured Photo

This layout is suitable for sites for the design, photography and e-commerce community, as it relies on having a large image that displays design or photography work with a vertical left or right navigation menu, Figure No. (13).



Figure No. (12) Headline & Gallery Layout

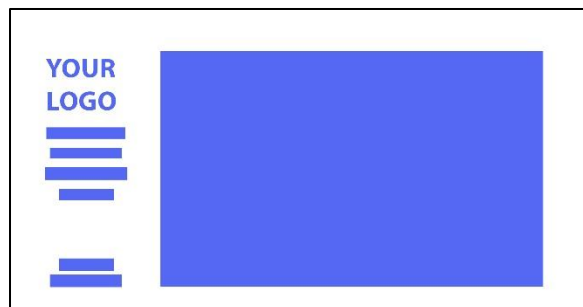


Figure No. (13) Featured Photo Layout

9- Power Grid Layout

This layout is suitable for news websites, magazines or blogs and is effective and can add any amount of information, whether images, text, videos, and this layout is used in many news websites such as the BBC and CNN, Figure No. (14).

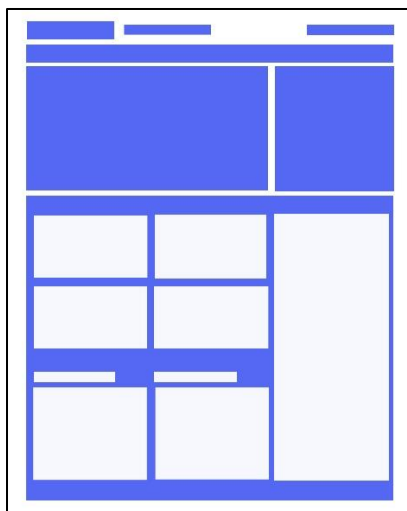


Figure No. (14) Power Grid Layout

10- Fullscreen Photo Layout

The full-screen image layout is one of the common design trends in many sites, whether personal websites or corporate and business websites, where the home page contains a visual element that is a full-screen image and may be a video expressing the service or product accompanied by a short comment, which is suitable for companies that have great visual elements and want to highlight a product or service in the form of an image or opening video on the first page, and the navigation bar is placed at the top of the page with high-contrast colors until it appears from above the background as links to all the contents of the site, Figure No. (15).



Figure No. (15) Fullscreen Photo Layout

11- Zig-zag layout

This type of design guides users through a logical sequence of design elements in which the user's eye moves from the top left, then to the top right, then down diagonally until the end in the lower right corner in the form of the letter Z, in case the website is written in English, while the Arabic website will move the user's eye from the top right, then the top left, then move diagonally to the left corner.

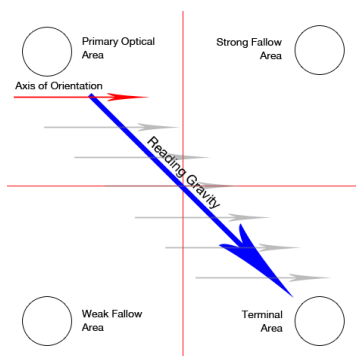


Figure No. (14) Zig-zag Layout

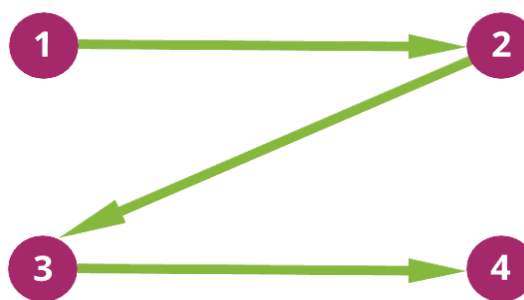


Figure No. (16) Card-based layout (46)

Website content elements are designed in the form of cards, which allows displaying multiple products or items in an easy-to-use way, and is suitable for commercial websites that contain a range of products such as cosmetics and others, Figure No. (16).

12- Card-based layout

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13- F- layout

The elements of the site are coordinated so that the page is scanned or read and the reading path is in the form of the letter F, that is, reading is done from the top of the page and then going vertically downwards where the left side works as a pivot point, so the top part is considered the vital part that contains the most important news and information, Figure No. (18).

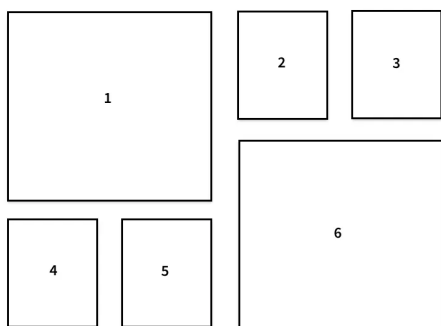


Figure No. (17) Zig-zag Layout (47)

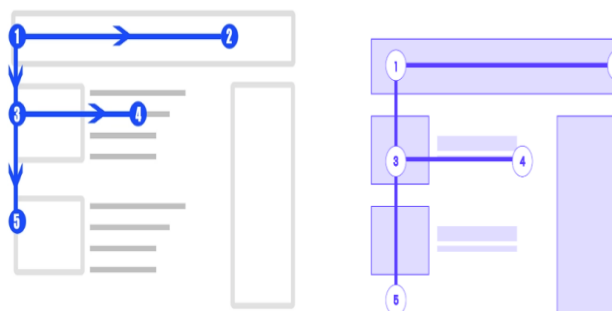


Figure No. (18) F – Layout (23)

14- Split screen layout

In this layout, the website interface is divided vertically or horizontally from the center so that there is a balance between the two sections and each section expresses a different topic or one topic from two different angles, and thus this design allows both sections to complement each other or to choose the user between two opposing options or present two different types of content, and design can be used to equalize between text and images and so on, Figure No. (19).



Figure No. (19) Split screen layout

15- Asymmetrical layout

In this layout, the screen is divided into two parts that are not the same in size or weight, which creates a dynamic visual movement, and the user's focus can be attracted to a specific element by making it a focal point and giving it a greater visual weight, whether by size, color contrast, or magnified proportions of the space for visual emphasis, and this type of layout gives a contemporary and innovative appearance, Figure No. (20).

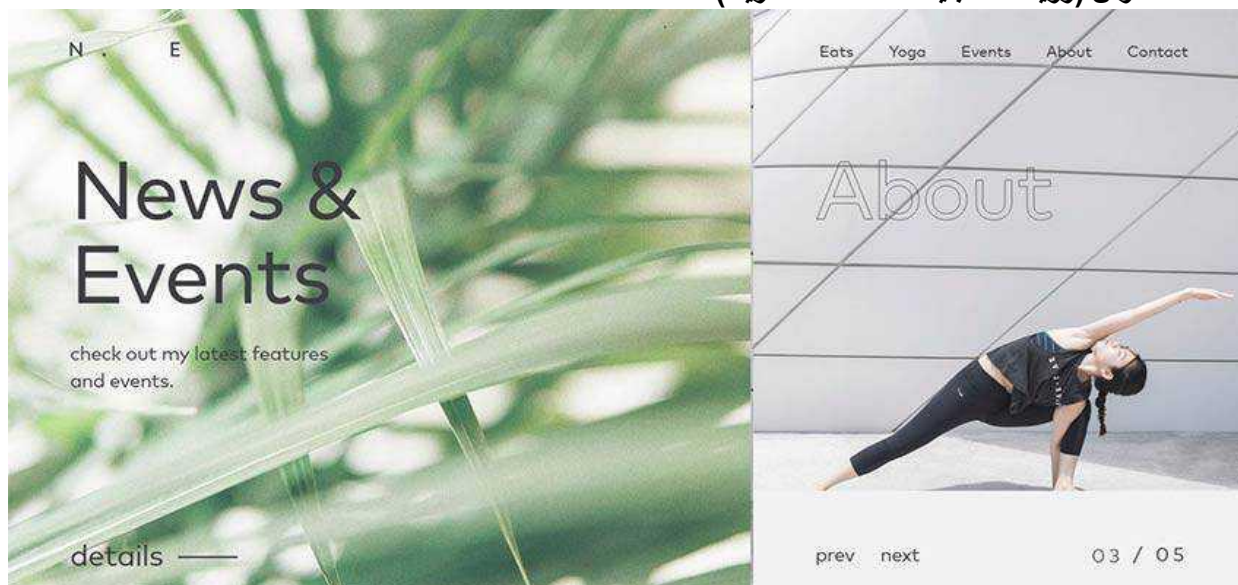


Figure No. (20) Asymmetrical layout

16- Single column layout

This layout is suitable for websites with long content or that display content in chronological order where it contains a lot of text and relies on placing all the contents of the site in the form of a text column and separating its paragraphs with images, drawings or commas and headings where navigation is done by scrolling down the page with a fixed menu to help the user access information, Figure No. (21).

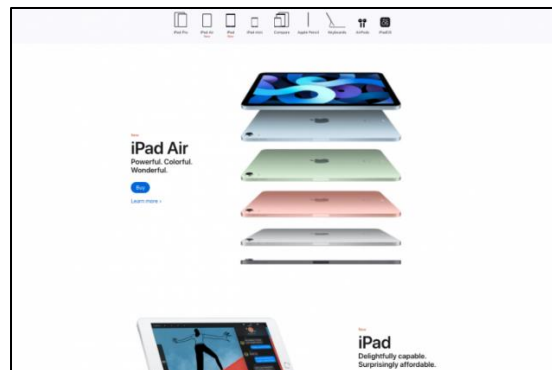
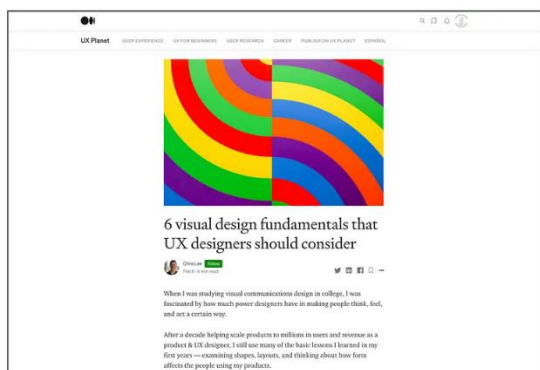


Figure No. (21) Single-column layout

19- Hero image layout

The hero image layout is done by choosing an image that is visually pleasing and attracts the visitor's emotions and appears at the top of the website and can be the first element that the user sees because of its prominent position and can impress users and provide a quick visual message about the website and usually covers the entire space on the main page of the website, and the hero image can be an eye-catching graphic or display products or promotional messages, and usually features a hero image (or full screen image) followed by content arranged in a zigzag or similar manner and the human face is in fact always a good way to attract the viewer's attention, Figure No. (22).



Figure No. (22) Hero image layout

20- Box-based layout

The site is laid out as multiple boxes of content in one geometric design with each piece of information neatly restricted to a box. The elements do not overwhelm each other resulting in a unified look. Each box leads to a different web page so that users can learn more about the topic they are most interested in, a large featured box can be added to serve as the header of the site and linked to the different boxes below. The featured box can include the page title and a brief explanation of its content, as well as a navigation menu of Visual elements in each box that work well together to create a cohesive identity, an ideal format for a site that includes many pages, Figure No. (23).

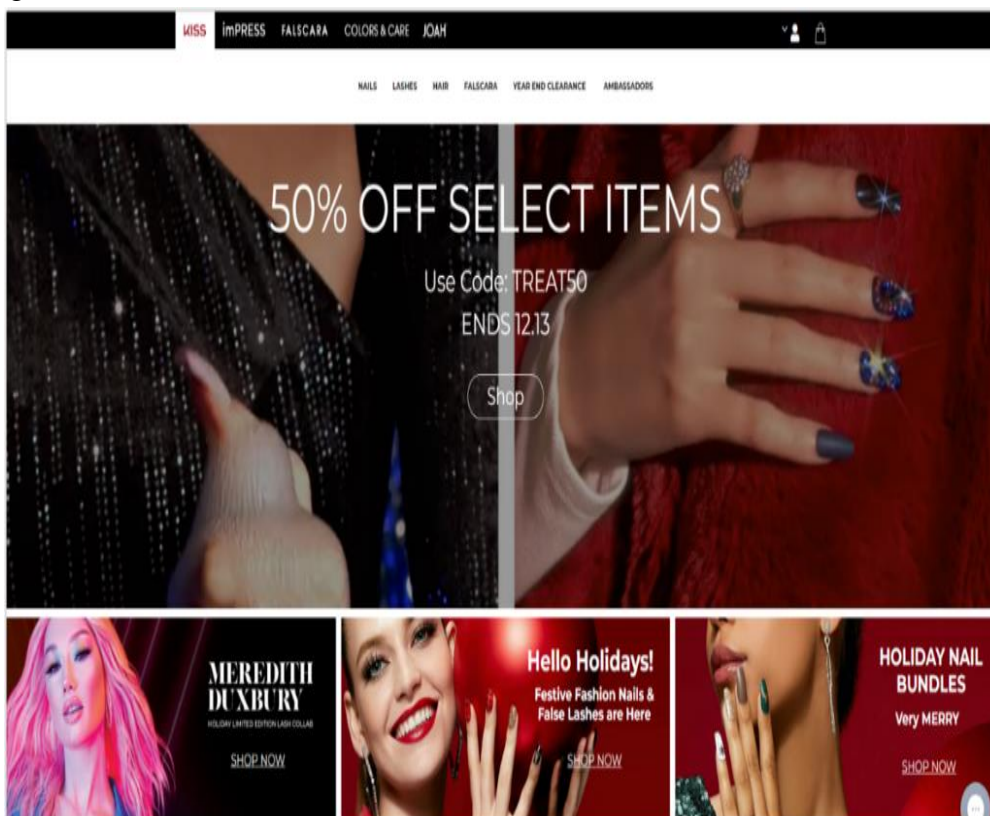


Figure No. (23) Box-based layout

Fifthly: A descriptive-analytical study of some websites

The researcher conducted a descriptive-analytical study of many websites, and 20 websites were selected from that sample, covering different fields and with some observations on the design, and the following is a statement of those websites followed by pictures of their homepage, Figures No. (24), (25) & (26).

	Website Name	Website Domain	Website link
1	Last News – Egypt	The latest news from various local, Arab and international news sites	https://a5r5br.net/?country=7
2	Quora	A place to exchange knowledge and better understand the world	https://ar.quora.com
3	Your Japanese store	Marketing store for a wide range of products	https://daisome.com/ar
4	homegrownmkt	Marketing store	https://www.homegrownmkt.com
5	Candy Park	Children's chocolate and candy store	https://candypark1.com
6	Arageek	An Arabic youth magazine	https://www.arageek.com
7	Alfanous	Religious search website	https://www.alfanous.org/ar
8	Fasel news	News website	https://www.faselnews.com
9	Kalam social	Important social media trends and social media updates	https://kalamsocial.com
10	Egypt guide	Companies and commercial activities for all Egyptian governorates	https://infoeg.com
11	Marmomarbale for Marble and Granite	Marble and Granite Factory in Egypt	https://www.marmomarbale.com/ar
12	Divaexpertt Medical	An educational blog for skin and hair care industry	https://www.divaexpertt.com
13	Our healthy life	Medical website	https://perfumeriatucuidado.com
14	Kriqo Egypt	A search engine for products at the best prices, from the best websites and the latest offers.	https://www.kriqo.com
15	China-in Arabic	Shopping - Arab Shopping Portal	https://www.china-in-arabic.com

16	Sutra stores	Youth clothing industry through creative marketing strategies.	https://sutrastores.com/pages
17	FilGoal	A sports website in the Arab world	https://www.filgoal.com
18	Yallakora	Sports website in the Middle East	https://www.yallakora.com
19	Online-wrestling	Professional Wrestling News and Shows	https://online-wrestling.info
20	All-souq	The Egyptian all souq	https://eg.all-souq.com/ar/

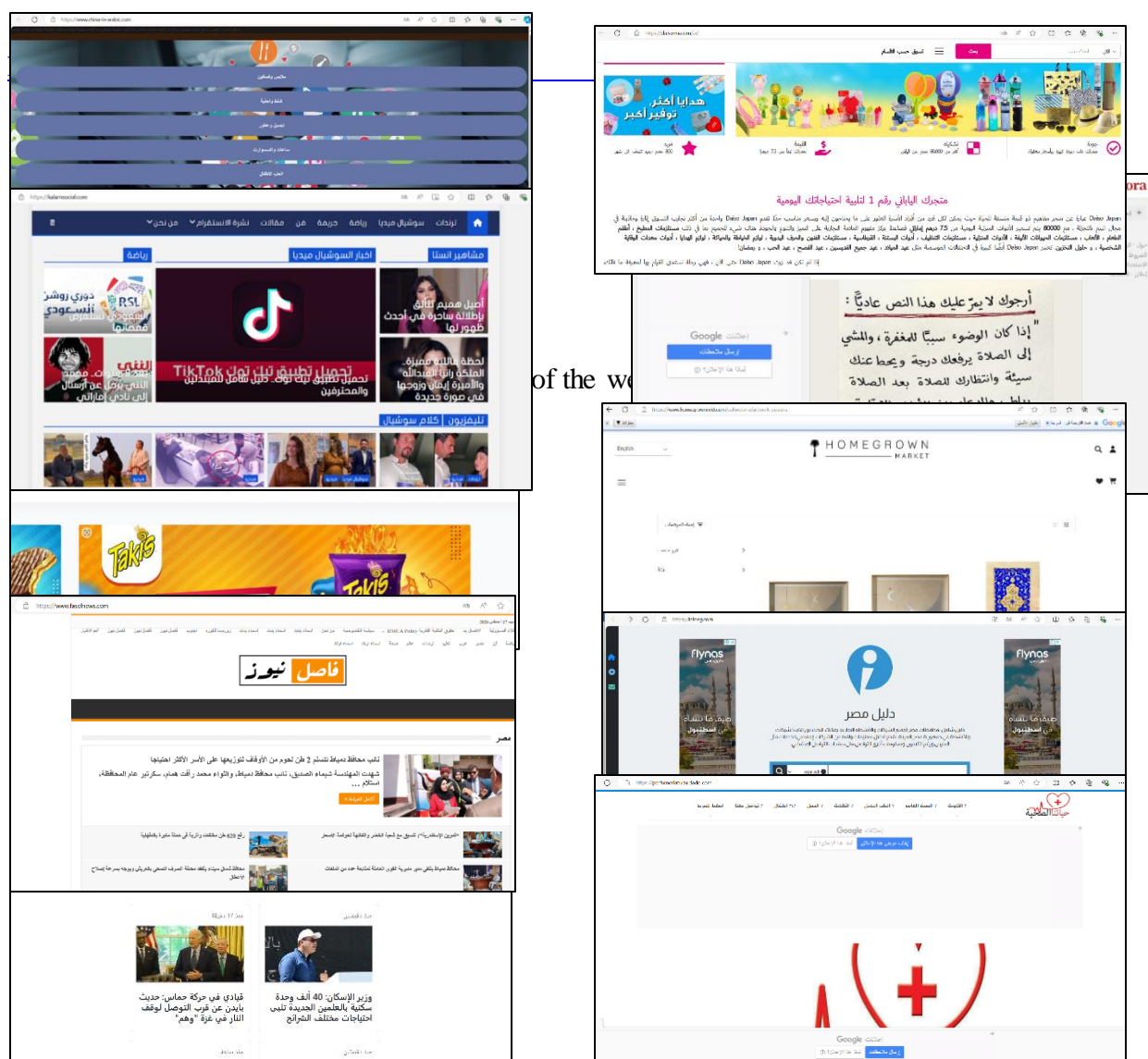


Figure No. (25). Photos of some of the websites mentioned in the survey

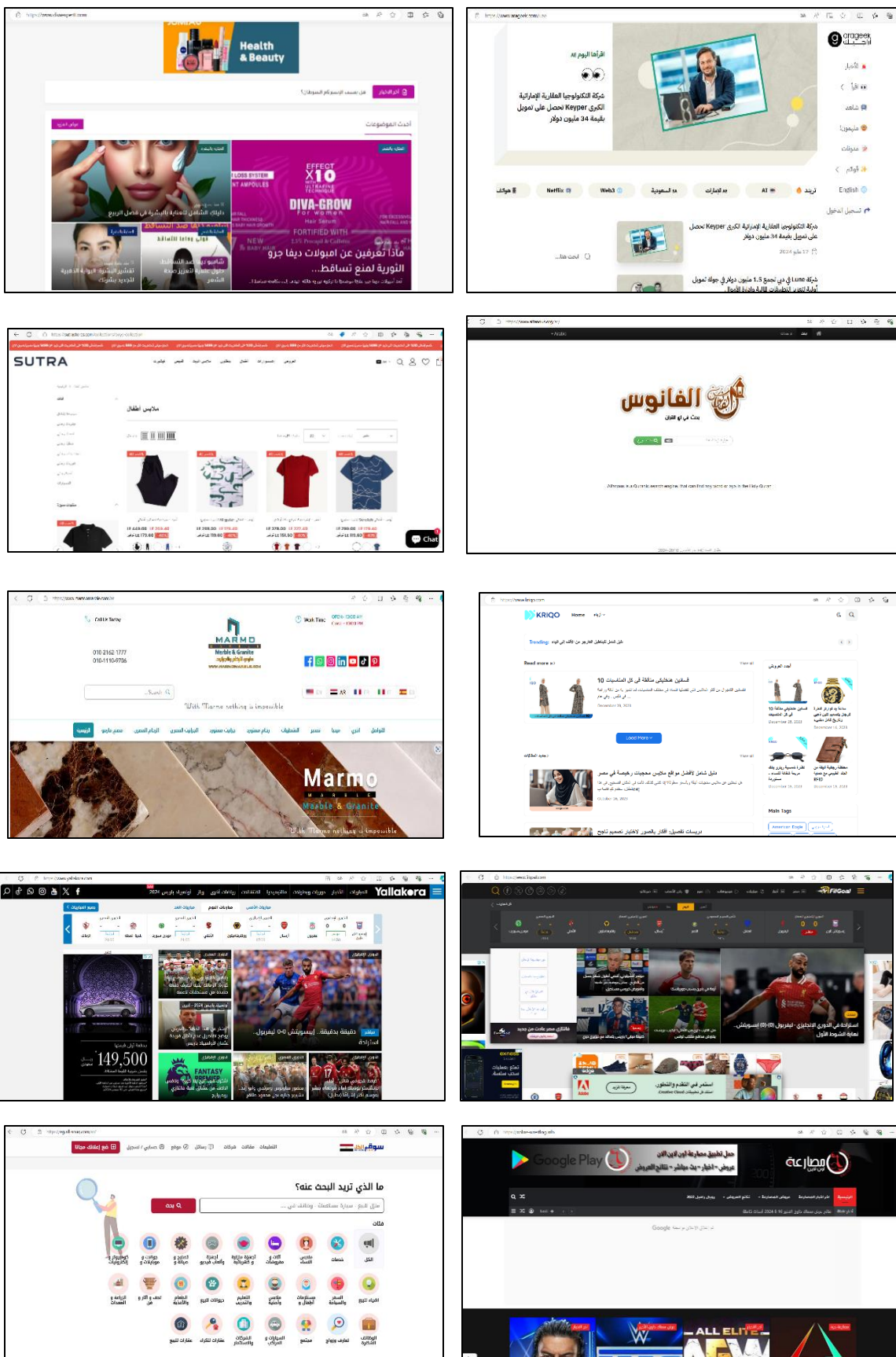


Figure No. (26). Photos of some of the websites mentioned in the survey

Study results

The researcher conducted a descriptive-analytical study of the previous websites and focused on the most important weaknesses of the graphic design of those websites. The results of each website were as follows:

1- Last News – Egypt website

- The website is not responsive to laptop screens, as a large white space appears on the right and left sides, and the website does not fill the entire space.
- The navigation menu needs to be redesigned as more than one type of browsing was used with the same menu elements (The Horizontal Navigation Bar – Vertical Sidebar Navigation Menu, Dropdown Navigation Menu, Hamburger Navigation Menu) and it would have been preferable to use horizontal browsing as the design allows for that.
- The presence of voids and many white spaces randomly.
- <https://a5r5br.net/?country=7>

2- Quora website

- The website design is not responsive to desktop and laptop devices.
- The navigation menu relies on icons that are not recognizable to all users and needs to be redesigned.
- The design relies on only one column and large voids on the sides.
- The presence of advertisements irregularly and randomly on the left side.
- <https://ar.quora.com>

3- Your Japanese store website

- The presence of void and white spaces in an unplanned manner.
- The fonts used in the writing are unsuccessful in size and shape and need to be replaced.
- The design of the footer needs to be reorganized and redesigned.
- <https://daisome.com/ar>

4- homegrownmkt website

- The navigation menu relies on Hamburger Navigation Menu despite the presence of a large unused and unacceptable void in design.
- The presence of a large void within the site is unused and does not achieve any aesthetic form.
- <https://www.homegrownmkt.com>

5- Candy Park website

- Header design contains many more elements than the recommended maximum of 7 elements.
- The website logo is not clear, which is one of the main elements that must be shown and taken care of to support the visual identity of the institution.
- There is a crowding of content elements and it is preferable to rearrange and redesign them.
- <https://candypark1.com>

6- Arageek website

- There is no Header for the website.

- It is not fully responsive to laptop screens, as there is a large void space on both sides of the website.
- The navigation menu is vertical, but it is not distinguished from the rest of the website, whether there is a background in a certain color or any separation that distinguishes it from the rest of the page.
- The Footer needs to be redesigned and organized as it occupies a large space vertically and there is a gathering of all social media elements in the middle with voids on both the right and left sides.

- <https://www.arageek.com>

7- Alfanous website

- Header design does not contain the website's logo.
- Not easy to search for the average user.
- When doing a search, some writings appear in a small size that is not suitable for reading.
- Footer design is simple and needs to add some communication elements.
- The website interface design needs to be reconsidered, as it contains large empty voids devoid of content or design elements.

- <https://www.alfanous.org/ar>

8- Fasel news website

- The website design is not fully responsive for laptops.
- The Header design needs to be redesigned, reorganized and some links that can be moved to another place on the website.
- The Footer design needs to be completely redesigned as it contains many elements that need to be rearranged and organized, and the font used is clearly unreadable.
- The appearance of advertisements within the content in a way that affects the user's focus and may even lead to departure from the website.
- The presence of many white spaces devoid of any content.

- <https://www.faselnews.com>

9- Kalam social website

- The Header needs to be reorganized and redesigned.
- The appearance of the titles of some topics on the images in a way that is difficult to read.
- The interference of advertisements within the content of the website needs to be reconsidered.

- <https://kalamsocial.com>

10- Egypt guide website

- The Header design is vertical, unfamiliar to the user and incomplete elements
- The presence of a lot of white space with randomly overlapping advertisements
- The Footer occupies a large vertical space with a large void that does not match with the elements inside it

- <https://infoeg.com>

11- Marmomarble for Marble and Granite website

- The Header design needs to be rearranged and organized.
- The Footer occupies a vertical space and is crowded with elements that need to be redesigned.
- <https://www.marmomarble.com/ar>

12- Divaexpertt Medical website

- The website is not fully responsive to the laptop screen display.
- The advertisements are inappropriately intertwined with the content.
- The presence of writings on the images makes it difficult to read them.
- There is no professional Footer and most of the elements in the Header should be moved to the Footer.
- <https://www.divaexpertt.com>

13- Our healthy life website

- The user interface needs to be redesigned, as the large-sized logo image occupies the entire page space and is incomplete.
- The website design is 2 columns and the first column on the right is divided into a picture on the right and the writings that belong to it in the left part and the second column on the left is a picture on the left side and the writings that belong to it in the right part of the second column, so the website design has become pictures on the right and left and writings in the middle, and it is preferable to reverse the contents of the first column so that the writings in the beginning are right and the pictures are left and the second column is the same.
- The Footer at the bottom of the page is the same as the Header and therefore needs to be redesigned.
- <https://perfumeriatucuidado.com>

14- Kriqo Egypt website

- The website has a technical problem and is subject to downtime.
- <https://www.kriqo.com>

15- China-in Arabic website

- The website is a single page and there is no Header or Footer.
- The navigation is vertical and lacks design principles.
- The design of the front page is only an image in addition to the vertical navigation menu.
- The user experience is completely unsatisfactory due to the lack of application of recognized design principles and rules.
- <https://www.china-in-arabic.com>

16- sutra stores website

- There are technical problems with the website at times.
- There is an overlap between Arabic and English writing and the lay out needs to be rearranged, organized and redesigned.
- <https://sutrastores.com/pages>

17- FilGoal website

- The lay out is disorganized and unarranged and there is an inappropriate overlap of advertisements with the content of the website.
- The Footer lacks contact information and at the same time this information is present in the Header and it is preferable to redesign the Footer better.
- <https://www.filgoal.com>

18- Yallakora website

- The Header has many elements that need to be organized and reduced, and social media links should be moved to the Footer to reduce congestion.
- The website is not fully responsive to laptop screens as there is a large blank space on the left and right sides.
- The writing on the images is difficult to read and can be placed below the images.
- <https://www.yallakora.com>

19- online-wrestling website

- There is no consistency throughout the website regarding the lay out.
- The presence of advertisements within the site in a way that interferes with the content and distracts the user's mind.
- There is an unjustified void on both sides of the site in some parts, despite the presence of images that fill both the left and right sides of the same website, including the Header and Footer.
- The lay out design of the Header and Footer has many elements that need to be reorganized and rearranged.
- <https://online-wrestling.info>

20- all-souq website

- The lay out design of the website requires reorganization and coordination.
- The website is not fully responsive, as there are some voids on the left and right sides of some parts of the website and some parts are not present when viewing the website from a laptop.
- <https://eg.all-souq.com/ar/>
- The study showed that there are many websites that lack the application of graphic design principles in terms of coordination, color selection, fonts, or composition in general.
- There are observations on the design of the user interface and user experience of some of the studied websites that directly affect the quality, satisfaction and acceptance of customers for the products or services they provide, so the researcher prepared a guide to the most important graphic and interactive design standards that can benefit those responsible for designing websites.

Sixthly: Website Design Guidelines

Good design has the ability to improve the website, so rules that affect the quality of the user experience must be applied, such as ease of use, structural design, ensuring easy access to the website, not increasing the density of content to ensure fast loading and browsing so that it does not take a long time to load, and ensuring that all links direct the user to the correct page, with

clarity of content, readability, ease of navigation through the website, and a design that is compatible with users of different devices such as desktop, laptop, and mobile phones. Poorly designed websites may lead to users being turned away from the website and making them search for the content they need elsewhere, so research is being conducted to identify the elements of website design that affect the user experience.

Below is a guide that includes the principles that must be considered when designing the website and that help improve the user experience:

1- Simplicity

It means the least complicated and most beautiful design and not using any unnecessary elements that do not serve any functional purpose and make it difficult for the user to accomplish what he wants. The aesthetic appearance is important, but without neglecting the functional aspect. The user wants to obtain specific information from the site or implement some procedures to obtain a specific service. Among the considerations that help in the simplicity of the design and ease of follow-up:

A- Not to use many colors: It is recommended to use a color palette that contains 1 to 3 primary colors for most of the design and 1 to 3 secondary colors to contrast the design.

B- Choosing high-contrast color palettes or colors that lie directly opposite each other on the color wheel, as colors by nature convey emotions and these colors can have a strong impact on the user's reaction to the site, and it is possible to use different shades of the same color to achieve cohesion in the design.

C- Ease of reading is the most important, so it is preferable to choose the appropriate, simple, easy-to-read font that sets the tone for the entire website design, affects the general character, gives it a distinctive identity, and plays an important role in improving the user experience, as Serif fonts express tradition, originality, and an elegant appearance, while Sans serif fonts express modernity, renewal, simplification, and a modern appearance, and Script fonts express flexibility.

It is preferable not to use many fonts, as this may cause inconvenience and lack of focus for the user. However, two different fonts can be used with different weights and variables, such as bold, condensed, or italics, with the possibility of changing the colors.

- The colors of texts and titles must be clear and simple in form, and not use many colors, with a contrast with the background color. It is recommended to use three different font shapes with a maximum of three sizes.

- It is preferable to have white space for the simplicity of the design, as complexity is not seen as beautiful. On the contrary, sites that contain white (negative) spaces are the most attractive, as they give focus to one element and avoid distracting the user.

- It is preferable to maintain the principle of alignment of elements to build the structure of the page to guide the user's eye to the desired place on the site because unorganized elements lead to the creation of a random design that is not favorable to the user.

- Although minimalism is preferred, this does not mean that vibrant colors, varied fonts, and high-quality images are not used to create a high-impact website with ample white space, fonts, and elements lined up to create a distinctive design.

2- Visual Hierarchy

One of the basic concepts in website design is to attract attention to the most visually dominant element in the design through its place on the page, which encourages the user to follow a specific path required as it helps to create a focus point on part of the content and an entrance to start moving the eye within the website from the most important information to the least important through the organization and arrangement of site elements in terms of location, color or size in a way that attracts the user's eye to the most important element to lead the user to complete a specific action in an easy way or focus on a specific topic in order to improve user experience.

3- Navigability

- The quality of the user interface is determined by the way in which users navigate through the pages of the website and preferably navigate, search and access to what the user wants easily and in a hierarchical manner arranged through the simplicity of building navigation and the presence of navigation paths on each page with a search bar to enable the user to access what he wants on the website easily, preferably not more than three levels, while maintaining consistency on all pages.

- A call to action (CTA) button is a word or phrase that invites the user to take an action on the site and represents the purpose for which the accompanying content was created and the CTA is placed in the appropriate place to take the desired action such as: Register, browse products, enter information, and use design and colors that distinguish it from the surrounding space to attract the user's attention, such as contrasting colors between the color of the button and the text written on it, contrasting between the color of the button and the background color or leaving white space.

- Apply the basic principles of navigation menu design, including the following:

- Keep it simple and contain a few main categories that cover the main topics or goals of the site, and use concise descriptive labels that are easy to understand.

- Avoid using specialized terms, abbreviations or ambiguous terms that may confuse the user or make them click on the wrong option and avoid having too many sub-menus or drop-down menus that may confuse or distract the user and use them only when necessary to group related items.

- The menu should be visually appealing and easily accessible as it is usually located at the top of the page if it is a horizontal menu, on the left side if it is a vertical menu, and on the right side if it is a vertical menu for an Arabic website.

- The navigation menu should be visible and easy to find on the website and should be located in a prominent and consistent place on the website such as the top, left or right side of the page, and use a contrasting color or font to stand out from the background.

- They need to be clearer to access, responsive and adapt to different screen sizes and devices as their layout and behavior changes when used on screens with different screen widths such as mobile phones.

- Use short, descriptive listing titles that are shortened to one or two words with enough description to tell users what type of content they can access, and accurate descriptions are good for search engines.

- Minimize the number of items in the navigation menu to seven or fewer so that the menu doesn't look cluttered.
- Minimize the use of dropdown menus and do not use dropdown menus that lead to other dropdown menus and prefer mega menus to offer multiple options.
- Use common patterns and symbols that users recognize such as icons, search bars or logos and use terminology that users understand.
- Provide feedback and cues that inform and guide users as they interact with the navigation menu, such as using visual or auditory cues that indicate the status and movement of the navigation menu, such as highlighting, changing color or making a sound, when users hover, click or select an option, to give more confidence and engagement with the menu and prevent confusion.
- It should be clearly visible and permanently positioned at the top or side of the website page, which is where visitors expect to find the menu.
- Apply one of the Types of Website Navigation, the way it is organized depends on the target audience and the format that will be more easily accessible, and the following are some of the common types of website navigation.
 - A- The Horizontal Navigation Bar is the most common type and lists the main pages side-by-side and places them at the top of the page.
 - B- Vertical Sidebar Navigation Menu, which is suitable for a menu with many items and links with the ability to increase the options at any time.
 - C - Dropdown Navigation Menu, an option suitable for websites with a complex information structure that requires a lot of links to pages, as horizontal mode is not suitable.
 - D - Hamburger Navigation Menu is a good option if you have limited space on the website or don't want the navigation to take up too much space.
 - E - Footer Navigation Menu, which is an option available to the designer, if necessary, but the user experience may be uncomfortable, Figure No. (27) .

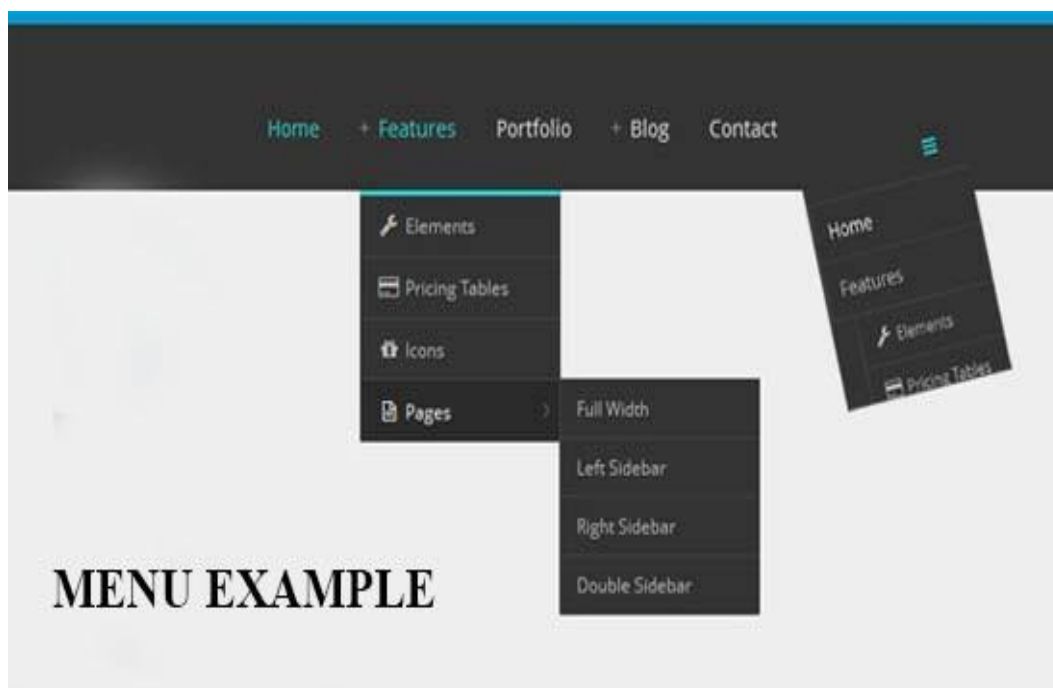


Figure No. (27) Menu examples

4- Consistency

There should be a consistent approach in the choice of fonts, colors, quality, lighting and proportion for all pages of the website, whether navigation or graphic design, to maintain the coherence of the website as a whole and at the same time facilitate the user's visual access to similar information by similar color, background or fonts.

▪ 5- Responsivity

The website design must be compatible with different devices, whether a desktop computer, laptop or mobile phone, so that the size of the pages changes automatically to suit the user's device, as well as its compatibility with all browsers: Google Chrome, Safari, Microsoft Edge to achieve a great user experience.

6- Accessibility

The design of the website should allow anyone to use it easily without complicating the user experience, and this applies to all the different design elements of the website, whether graphic design for written and visual content, in accordance with the Web Content Accessibility Guidelines (WCAG), which are as follows: The ability to perceive the content by the user (Perceivable), the ability to operate the functions of the site in different ways (Operable), the ability to easily understand all content and alerts (Understandable), the ability to operate the site on different browsers and devices (Robust).

7- Conventionality

It is preferable to maintain originality in design, that is, not to break the traditions that the user is accustomed to and feels comfortable when dealing with websites and at the same time show the designer's experience in development and modernization, meaning that we do not spoil the user's experience that he expects, the challenge facing the designer is to balance between originality and his ambitions in a wonderful design, as the user is accustomed to: The presence of the main navigation menu at the top or left for foreign sites and right for Arabic sites, the presence of the logo at the top of the page, whether in the middle or the right or left side, making it clickable to transfer the user to the main page, having links and buttons that change color/appearance when you hover over them, the presence of a shopping cart icon, or icon indicating the number of items saved in the cart, having transition arrows on the web slideshow to move between images and so on.

8- Credibility

The website must have clarity and honesty regarding the product or service it offers and provide all the information that the user is looking for to provide him with the best user experience. There is no need to force the user to contact to know more details or prices, but the website must be clear to give more confidence and legitimacy.

9- User-Centricity

The principle of designing for the user must be applied, recognizing the opinions and preferences of users and implementing them when designing the website to make it easy to

obtain the information they want in the shortest time, and doing the necessary research to identify the nature of the expected users in order to build the website, plan it and choose its contents to achieve a response to their input, while achieving excellence and creativity in the appearance of the contents of the site in an appropriate manner that suits the expected users.

10 - Before choosing a website design, the designer must consider the designs of competitors' websites to identify the design aesthetics that attract customers in the same field and how to show the brand and choose modern designs related to the theme of the website, as website designs change over time in the direction of the latest market research.

11- Market research and analysis should be done continuously to understand the demands of the target audience before starting to design the website.

Seventhly: Research results

1 - Failure to observe the principles of functional and aesthetic design of the website makes the user not prefer to deal with it, which negatively affects the product or service it provides, and this is a result of marginalizing the role of specialists from graphic and multimedia designers and relying on others in creating websites.

2- The study showed the need for the existence of standards for the design of websites. The poor graphic design of the website leads to a lack of public interest in it and goes to another competitor's website, which reflects on the success of the organization.

3- To achieve the goals of sustainable development, quality of life, and full digitalization, we need well-designed websites that are attractive and meet the needs of customers, which supports the comprehensive digital transformation of all service, commercial, and economic transactions in all sectors of the country.

Eighth: Research recommendations

1 - The researcher recommends the necessity of having specialized graphic and multimedia designers in website construction companies, who are mainly relied upon in the graphic and interactive design of the user interface of the website.

2- The researcher recommends that those who create websites should benefit from the guidelines for graphic and interactive design standards resulting from this research.

3- The study recommends that those in charge of creating websites should provide continuous training and education for designers to follow all new developments in order to design innovative websites that support the goals of organizations in communicating continuously and effectively with the target audience.

4- The researcher recommends that the faculties of art and design, in addition to what they already teach the courses of website design and applications within their teaching plan for the graphic specialization, add a one-year diploma program specialized in website design and applications in an intensive and expanded manner to provide the market with scientifically and academically qualified designers who are trained at the highest level and follow all that is new in terms of techniques, tools and programs.

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