CULTURE AND ART

EWOLUCJA PROJEKTOWANIA STRON INTERNETOWYCH E-COMMERCE

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Adnotacja. W artykule omówiono cechy powstawania i rozwoju witryn e-commerce od 1991 roku (pojawienia się pierwszej witryny) do 2024 roku. Przeprowadzono analizę literatury naukowej i praktycznej na ten temat. Informacje na temat rozwoju projektowania witryn e-commerce zostały usystematyzowane. Określono i scharakteryzowano okresy i etapy jego kształtowania i rozwoju. Podstawą badania była analiza zmian, jakie zaszły na stronach internetowych światowych liderów w dziedzinie e-commerce pod względem rozwiązań kompozycyjnych, kolorystyki, rodzaju układu, stosowania czcionek, cech projektowych oraz rozmieszczenia bloków informacyjnych na stronie internetowej. stron. Stwierdzono, że różne etapy rozwoju witryn e-commerce były uzależnione od możliwości technologicznych w zakresie prezentacji informacji graficznych, zmian w projektowaniu graficznym i trendów w modzie. Ustalono, że rozwój technologii projektowania stron internetowych, urządzeń przekazujących informacje, sieci społecznościowych i systemów płatności w środowisku online zapewnił rozwój projektowania stron e-commerce.

Słowa kluczowe: historia projektowania stron internetowych, rozwiązania kompozycyjne, bloki informacyjne stron internetowych; technologie projektowania stron internetowych, Amazon, Apple, elementy projektowania.

EVOLUTION OF E-COMMERCE WEBSITE DESIGN

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Abstract. The article highlights the features of the emergence and development of the design of e-commerce websites from 1991 (the appearance of the first website) to 2024. A thorough analysis of the scientific and practical literature has been conducted to investigate the development of e-commerce website design. The study has systematically identified and characterized the periods and stages of its formation and development. The research is based on a detailed analysis of the changes that have taken place in the websites of the world's leading e-commerce companies, including composition, color scheme, layout type, use of fonts, design features, and placement of information blocks on the pages of websites. The study reveals that the different stages of development were due to the advancement of graphic information presentation, changes in graphic design, and fashion trends. The study has also determined that the evolution of web design technologies, devices for relaying information, social networks, and payment systems in the Internet environment have significantly contributed to the development of e-commerce website design.

Key words: history of web design, compositional solution, website information blocks; web design technologies, Amazon, Apple, design elements.

ЕВОЛЮЦІЯ ДИЗАЙНУ ВЕБСАЙТІВ ЕЛЕКТРОННОЇ КОМЕРЦІЇ

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Анотація. У статті висвітлено особливості виникнення та розвитку дизайну вебсайтів електронної комерції з 1991 року (поява першого сайту) до 2024 року. Проведено аналіз наукової та практичної літератури стосовно означеної тематики. Систематизовано інформацію про розвиток дизайну вебсайтів електронної комерції. Визначено та охарактеризовано періоди та етапи його становлення і розвитку. Основою дослідження став аналіз змін, які відбувалися з вебсайтами світових лідерів електронної комерції з точки зору композиційного рішення, колірної гами, типу верстки, використання шрифтів, особливостей дизайну і розміщення інформаційних блоків на сторінках веб-сайтів. Виявлено, що різні етапи розвитку дизайну вебсайтів електронної комерції були обумовлені технологічними можливостями представлення графічної інформації, змінами в графічному дизайні та модними тенденціями. Визначено, що розвиток технологій вебпроєктування, пристроїв для ретрансляції інформації, соціальних мереж та систем оплати в інтернет-середовищі забезпечили розвиток дизайну веб-сайтів електронної комерції.

Ключові слова: історія вебдизайну, композиційне рішення, інформаційні блоки вебсайту; технології вебпроєктування, Amazon, Apple, елементи дизайну.

Introduction. E-commerce website design has changed dramatically in recent years, from the simple, static pages of text on a gray background of the early 1990s to the visually rich, interactive, responsive designs of today. During this time, e-commerce website design has undergone several metamorphoses and dramatic changes. This rapid evolution is largely due to the emergence of new technological capabilities and the fact that web design did not develop in a vacuum, but shared similarities with design and art trends of the twentieth century. Similar to graphic communication, industrial design, and art, web design has become an aesthetic phenomenon in its own right, with its means of presenting information. Despite the importance of the Internet as a design medium, the evolution of Web site design has been described sporadically without a systematic approach to the phenomenon. Changes in the design of e-commerce websites have not been studied at all and therefore require analysis and systematization of information both from the literature and electronic archives (Historic Websites Page – Version Museum, Wayback Machine – Internet Archive; Web Design Museum тощо) that store archived web pages for more than 30 years of Internet development.

The analysis of modern scientific and practical works has shown that theoretical developments on the topic of web design and the history of its development belong mostly to researchers in the United States and Western Europe since it was there that this field appeared and developed before it appeared in the domestic space. Thus, detailed studies (Meggs, 2016) have been devoted to the development of the history of graphic design from Egyptian cuneiform to web design and interactive design. However, unlike other types of art, the work does not contain definitions or characteristics of the periods of development of design on the Internet, despite its more than 30-year history. The works of I. Engholm (Engholm, 2007, 2010) show how the development of websites can be analyzed from a genealogical point of view, pointing out a number of genre and style formations and discussing their ideological and cultural sources. A group of American scholars (Garett et al, 2016) proved that today design has become a critical element necessary to attract users to websites and mobile applications. They have identified a list of the most essential design elements that need to be studied today. The list includes navigation, graphics, site organization, usefulness of content, simplicity, etc. Some other studies have shown that the analysis of the visual design of websites allows studying and systematizing information about the evolution of the Internet and reflects changes in visual aesthetics, the role of technology, cultural preferences, and technical innovations (Chen et al, 2017). These papers take a step toward defining and understanding website design periods. Based on a critical analysis of well-known websites that have been around for more than a decade, experts have identified a number of key markers that signal changes in design periods, which are delineated by certain layout patterns, display technologies, navigation models, and so on. Scholars have also suggested that the evolution of web design is driven by several factors, including technological development, changing roles and functions of the Internet, managing impressions of companies, changing aesthetic preferences of users, etc. In the work of B. Doosti and D. Crandall (Doosti et al, 2017; Kennedy, 2012), automated methods for determining the visual style of websites were developed based on a comparative analysis of changes over time between their main features. Among domestic researchers, the evolution of web design is studied by M. Opalev (Опалєв, 2016), O. Vakulenko (Вакуленко, 2016, 2017) and O. Vasiliev (Васильєв, 2023, 2024).

Summarizing the above, it has been determined that today there is no information on the evolution of e-commerce website design, and information on the development of web design is not systematic and has been insufficiently studied. The purpose of the study was to analyze and systematize information on the development of e-commerce website design based on the analysis of changes in visual elements of interfaces in the period from the first

online store in 1992 to the present, to determine the design features of e-commerce websites of different periods and the technological prerequisites for their development.

Main part. The purpose of the work was to identify, analyze and systematize information about the development of e-commerce website design. Based on the results of the research, the periods and stages of the evolution of the site design were identified and characterized. The compositional and graphic features of each stage are characteriz.

Research material and methods. This study employs an integrated approach and utilizes methods of analytical and visual-analytical analysis to explore and systematize information on the design features of the websites of world leaders in e-commerce, determined based on the analysis of images of their websites from various years in electronic archives and literary sources on the history of web design.

The work used materials from Internet archives (Historic Websites Page – Version Museum, Wayback Machine – Internet Archive; Web Design Museum) and information from periodicals (Look at how Amazon has changed since it first launched; A nostalgic journey through the evolution of web design; 28 Years of Amazon.com Website Design History) regarding the history of the development of world-famous online stores and marketplaces.

Results and their discussion. The impetus for the development and popularity of web design was the emergence of the Internet, and the beginning of its history is considered to be the moment when the first website appeared in the early nineties of the twentieth century. The peculiarities of the compositional and artistic solution of web pages, the presence of information blocks, and graphic and textual elements on them were determined by the technological possibilities of a certain period, and later by fashion trends in the use of certain elements of interaction, information search, etc. Various typological features of website design have appeared and disappeared, including due to changes in technology.

We have analyzed the first stages of web design development, when the basic rules of e-commerce website design were established. We define the period from 1991 to 2003 as the period of emergence and formation of e-commerce website design. In this period, we have identified three stages that differ significantly in technological capabilities, and differences in the design and composition of websites.

The first stage of web design evolution lasted from 1991 to 1993, starting with the launch of the first website on August 6, 1991. The first online store was opened in 1992 and was a digital catalog of book products. The technological potential of the time was determined by the low speed of the Internet and the resolution of 640x480 monitors, which could only display text. The characteristic features of website design at that time were web pages with blue text on a white or gray background, aligned to the left edge (Васильєв, 2023, 2024; Chen et al, 2017; Internet archive). Instead of a catalog, navigation used text hyperlinks that were highlighted in a different color and redirected users to other sites or pages within the same site. These were static sites designed for reading and information gathering and did not require user interaction. The first e-commerce sites could not buy and pay for goods but provided contact information to interact with businesses. The first version of the Internet, Web 1.0, was designed for businesses that hired Internet technology specialists to manage and develop websites. Advertising was banned on the Internet during this time. The first-stage sites were characterized by functionality and versatility of design, which challenged the commercial interests of individual companies. This led to further development of technologies for website design and information transfer on the Internet.

In April 1993, the first graphical browser, Mosaic, was introduced to support image display (Вакуленко, 2017; Васильєв, 2023, 2024; Chen et al, 2017; Engholm, 2007, 2010). This allowed e-commerce websites to be more personalized and informative, adding images with 16 colors to the homogeneous text on web pages. As the number of e-commerce sites grew, the concept of using design to achieve business goals and to create sites that were distinctive in their artistic and compositional features gained more traction.

The second stage of development of e-commerce website design took place in 1994-1998. The evolutionary changes in technology that took place at that time radically changed the design and composition of web pages. This stage was associated with rapid technological development and had the following features: an increase in Internet speed, the total resolution of the monitor screen up to 800x600 and support for up to 256 colors; structuring of information based on the concept of using tables that became available in HTML (Вакуленко, 2017; Васильєв, 2023, 2024; Chen et al, 2017) The use of tables made it possible to align content and define its size in pixels and percentages, structure information and organize navigation on web pages, supplement web pages with visual material, use dynamic elements, etc.

Flash technology was introduced in 1996, pioneering user-centered design (Васильєв, 2023, 2024; Опалєв, Вакуленко, 2016; Bradley, 2013; Chen et al, 2017: Doosti et al, 2017; Engholm, 2007, 2010; Kennedy, 2012). Its features include a combination of virtual graphics and interactivity, bright and saturated colors, three-dimensional buttons, and attention to site structure and navigation. Navigation features were expanded, allowing for changes in the size, shape, and color of elements when interacting with the user and when clicking or hovering the cursor.

In 1998, Cascading Style Sheets (CSS) were introduced as a method of structuring design elements. The main concept behind CSS was to separate content from the presentation of visual elements such as layouts, colors, and fonts.

Another significant event for the development of web design during this time was the release of Adobe ImageReady 1.0, a raster graphics editor designed for working with web graphics. Later, it became a part of Adobe Photoshop. Later, Adobe ImageReady 2.0 was added as a supplement to the editor for web graphics. A new feature called 'Save for Web' was introduced, which allowed designers to compress images for online use (Васильєв, 2023, 2024; Doosti et al, 2017).

The study discovered that the defining features of website design during that period included the use of advertising banners, which were first introduced in 1994. Additionally, websites reduced the amount of text and combined it with images, employed simple serif fonts, system fonts, and default fonts, aligned content, structured information, and organized navigation on website pages, used icons for navigation, and incorporated animation and interactive elements such as Gif images, animated text, and scrolling text.

This was the time when some of today's leading e-commerce companies emerged. In 1994, the first Apple website was launched. The study results showed that the website's main page was progressive for its time, featuring a rainbow logo that occupied more than half of the screen and used bright, luminescent colors. Additionally, the home page included links to different sections of the site displayed on rainbow stripes extending from the logo, and a search bar at the top allowed users to enter their queries. In 1996, Apple released a new version of their website with significant design differences. The logo was reduced in size and moved to the upper left corner. The upper part of the page featured the title in capital letters and a greeting from the company. The webpage displayed a list of website sections on the left-hand side, accessible through large buttons. On the right-hand side, the company's products were advertised. In 1997, the company redesigned its website. The color scheme was changed, a banner was added to the top, and a navigation block with hyperlinks and language options was created on the left side of the main page. The central part of the page contained text messages about the company's products with hyperlinks. The redesign resulted in a more spacious and user-friendly website. Over time, Apple's website design concept has evolved, with a primary focus on showcasing the company's products. The main page composition has been completely redesigned in a minimalist style. The top left half of the page displays the company's name and a large photo of the products. Below that, there are links to the site's sections and the logo, which has been reduced in size and changed to a one-color design. The company's website pages feature ample white space, high-quality product photos, and minimal text.

According to the research, Amazon's first site, which began as an online bookstore in 1995 and has grown into the world's largest marketplace, had a design that corresponded to the earlier period. The pages of Amazon's website did not contain search bars and had a typical early 1990s look in the form of text with blue hyperlinks. The website's name was indicated by a large logo in the upper left corner. In the second half of 1997, changes were made to the website's pages due to the growth of the assortment. It is worth noting that the main pages of Amazon and Apple's websites in 1997 had a similar composition. The Amazon website's homepage features a site navigation block with hyperlinks on the left side. The logo, located in the upper left corner, changes color and decreases in size. Below it, users can find information about the company's products, including hyperlinks in blue and images of book samples. The website's pages now have more free space, which enhances users' ability to perceive the available information. Amazon was an early adopter of user reviews, rating scales, and product reviews, which were effective tactics for increasing sales and building customer confidence. In 1998, changes were made to the design of the Amazon website, including updates to the company's logo. The updated logo for the website features a black design with the website name and domain zone, accented by a convex orange line. Additionally, tabs displaying the names of the main product categories have been added to the top of the Amazon homepage. The color scheme of the top section of the page has been modified, and links to the shopping cart and user account are now available in both icon and text form. The site's navigation block, highlighted in a light shade of green, remained on the left side. The central part of the page, where promotional product images are displayed, now has significantly more free space.

Thus, we have identified the compositional solutions for e-commerce website pages that reflect the conventions that began to form in 1998-1999 regarding the placement of the main components of a website. These include a logo located on the left, a left navigation block with links, centrally located content, and fixed and visible navigation bars with access to the main information located at the top right. The prevailing layout of information blocks for large online FMCG stores and marketplaces is based on the structure of e-commerce website pages that emerged in the late 1990s with a focus on usability.

The third stage of e-commerce website design development was between 1999 and 2003. Before 2000, website design was primarily a technical field (Вакуленко, 2017; Васильєв, 2023, 2024; Doosti et al, 2017). However, attention gradually shifted towards the artistic and aesthetic aspects of websites, with design incorporating information architecture (content structure), interaction (navigation), and visual appearance, including graphics, fonts, layout, animation, and video. During the period in question, the primary emphasis of e-commerce website design was on usability. This was achieved through the separation of website content from design using Cascading Style Sheets (CSS). This allowed for the unified appearance of the website to be controlled separately from the content of each page. During this period, there were two main innovations: a significant increase in the use of monitors with a resolution of 1024x768 and faster internet speeds. These advancements allowed developers to rely less on textual content and incorporate more graphics to communicate with users.

The research results indicate that the main trend during the period was the increasing emphasis on catalog and navigation elements due to the significant growth in the types and volume of content on the Internet. Most websites feature a search bar on their home page. The best practices for e-commerce website design that remain relevant today include an intuitive layout of information, visually highlighted links and simple navigation. Studies of websites such as Amazon, Alibaba (launched in China in 2000), eBay, and Apple have shown that the amount of free space on their pages has increased, which has had a positive impact on how users perceive information. The backgrounds of websites became monochromatic, typically white, which made it possible to avoid bright and saturated colors if necessary. Links were gradually combined with graphic images – icons. However, the number

of images on the main pages of e-commerce websites was kept to a minimum. The size of product images increased over time and began to occupy most of the space on category and subcategory pages. It has been determined that in the early 2000s, rounded corners of product cards and icons, and shiny buttons became fashionable in website design. Aesthetics also appeared in font blocks due to increased requirements for the text content design. At that time, both serif and sans-serif fonts were used. Headings were emphasized with larger font size and color. Active hyperlinks continued to be highlighted in blue and underlined.

Since the economic crisis of 2000, convenience has become a primary consideration in e-commerce website design, as demonstrated by various studies. Usability has been the main focus of web agencies, leading to increased standardization. Catalog and content layouts have become more intuitive, links more visually prominent, and navigation simpler. As a result, the design of e-commerce websites has stabilized around a small number of modifications.

The analysis indicates that the Swiss style, developed by advocates of digital modernism, influenced the modern design of e-commerce websites (Васильєв, 2024; Опалєв, Вакуленко, 2016). In the early 2000s, well-designed website pages became essential for businesses. The main function of design was to ensure that a website stood out. Therefore, individual design has become a necessary element of e-commerce websites.

Most of the primary web design trends are typical for the e-commerce websites of the world's largest online stores and marketplaces in 1999-2003. These websites continued to use tabular layouts for their design. For instance, the 1999 Amazon website became more comprehensible and informative despite the increase in the number of product categories. Small blocks of text provide information about all product groups, and users can search for products using the search bar located above the left vertical catalog, highlighted in a contrasting color. At that time, Amazon patented the one-click shopping option, which became one of the features that set it apart from the rest. The company continued to experiment with its catalog, logo design, corporate color, and site layout. The structure of e-commerce website pages and the location of certain information blocks were based on typical solutions that had emerged in the previous period. However, these solutions remain relevant today. For instance, Amazon reduced the number of tabs and moved the category links to the left vertical catalog due to the growing number of product categories and limited space in the top navigation area. The Amazon logo was also reduced in size to accommodate these changes. In 2002, Amazon experimented with a limited number of tabs at the top of the site and added a graphic element (icon) to draw attention to the opening of a new product category. Additionally, Amazon displayed high-demand products on the home page of its website.

The analysis revealed that differences in website design between luxury marketplaces and online stores began to emerge during this period. It has been determined that the website design of various marketplaces and large online stores was similar in terms of the general composition of web pages, and the arrangement of different groups of information blocks and elements. Most marketplaces use bright contrasting color schemes, banners, a left vertical catalog, and a significant amount of text content. They also use colored fonts and underlined hyperlinks. In contrast, Apple's online luxury store features a unique design with ample white space, high-quality product images, and a limited number of items per page. The color scheme is restrained and achromatic, and the navigation bar is simple. The text content is minimal and displayed in black font, with no banners. Apple's website focuses heavily on the main product offer, featuring high-quality photos that have increased over time and take up most of the space on the homepage.

The study found that by the end of 2003, the layout of e-commerce web pages had become similar to the current layout. Three main information blocks were identified on the website page: the identification block, which consists of a logo and is mainly located in the upper left corner; the navigation block, which includes a search bar and a product catalog and is located to the left and in the center of the top panel of the website page; and the main block, which contains the content and is located in the central part of the website page. Additionally, a banner at the top of the page is now an obligatory element. There was a gradual transition to the use of sans serif fonts. At that time, e-commerce website pages were characterized by an additional information block placed on the right side of the page and the use of numerous blue hyperlinks.

The next period of e-commerce website design evolution began in 2004 and continues to this day. It has been found that since 2004, the design of e-commerce websites has evolved due to the emergence of HTML5, which was the beginning of the Web 2.0 period – a set of trends in design, technology, principles of building applications, user interaction, etc. (Васильєв, 2024). It has been determined that the main design features of the Web 2.0 period are separation of site blocks into header, navigation, main information block (content) and footer; simplification of navigation and rejection of unnecessary graphic and textual elements; focus on content design; use of a tag cloud; increase in the amount of free space on web pages; use of large, readable text and sans-serif fonts; use of video materials and animated content; use of 3D effects, shadows, mirroring and rounded shapes in the design of icons and buttons, color accents on the main elements of the website.

We defined the period from 2004 to 2006 as the fourth stage of e-commerce website design development. It was found that monitors with a resolution of 1024x768, displaying 17 million colors, were prevalent. The increase in connection speed and the emergence of social networks Facebook (2004) and YouTube (2005) led to an increase in the amount of video content in the design of e-commerce website pages. The analysis revealed that the focus was primarily on the visual aspects of websites, such as their style, color, and font combinations. Many luxury websites have moved their navigation and search bar to the header of their web pages, and dropdown menus that open when the cursor is hovered over them have become popular. Additionally, interactive forms for filling out have been introduced. It has been determined that innovations have influenced the appearance of e-commerce website pages,

making them more aesthetic and thoughtful by rejecting unnecessary elements. However, the use of Flash technologies and static images that only served an aesthetic function was a disadvantage.

It has been found that in the mid-2000s, information design gained popularity as a means of conveying information through visual and graphic elements (Вакуленко, 2017; Engholm, 2010; Chen et al, 2017). The analysis has shown that the aesthetic principles of information design include: harmony, proportionality, and abstract solution of elements of interaction with users. It has been determined that the highlighted design features of e-commerce websites from the 2004-2006 period are characteristic of the home pages of Amazon, Alibaba, and Apple websites.

It has been found that in the period from 2004 to 2006, many new web design trends emerged. The most interesting of them was Flat Design, a trend that appeared in 2006 but became popular later.

It has been determined that the differences in the design of e-commerce websites during the fifth stage (2007-2010) were due to the peculiarities of information transmission and display on mobile phones, which have become common among most users. In 2008, mobile internet access surpassed access from personal computers. Since then, e-commerce websites have been developed, including mobile versions that contain only essential information from desktop versions. These mobile versions have minimal navigation, indicated by an icon, and are designed specifically for display on small screens (Вакуленко, 2017). As a result, mobile-friendly layouts and responsive design have become necessary to accommodate users with touch screens. In 2010, Ethan Marcotte proposed an approach to responsive design that involved using the same content for different layouts formatted for different devices. This approach provided a uniformity effect and was well received by users.

The analysis revealed that e-commerce websites have become more visually appealing since 2008. They have started using interactive images to engage users and provide information about products. Additionally, advertising promotions and discounts are now given a lot of space and are placed on banners and marked on product cards. Since 2010, there has been a trend towards minimalism in the design of luxury websites. Flat Design has become a prominent visual trend in e-commerce website design. For instance, the article displays an image of Apple's website pages from 2010.

It was found that the websites of the world's e-commerce leaders have introduced many new features, denoted by image icons. For instance, Amazon's website has become more structured and easier to navigate. To communicate with consumers, they used icons to denote various information such as product comparisons and reviews, shipping costs, and product ratings. The e-commerce websites designed between 2007 and 2010 share similar features, which are also present in Amazon's 2009 website, Alibaba's 2007 website, and eBay's 2008 website.

The analysis indicates that the sixth phase of e-commerce website creation and advancement spanned from 2011 to 2014. Throughout this phase, the minimalist approach to webpage design persisted as a prominent trend. Emphasis was placed on developing responsive mobile websites. Research revealed that Flat Design emerged as the predominant style for e-commerce website layouts during this period, a trend that endures presently. When designing websites in this style, simplified visual components were adopted, with a departure from shadow effects. According to research, Flat Design gained popularity in 2012-2013 due to its minimalist approach to website design, focus on typography, and simple interface elements (Опалєв, Вакуленко, 2016). The use of larger fonts and icons helped to create an intuitive interaction between the user and the interface. The analysis revealed that during the period of increased mobile device usage, website page design featured the following: increased free space, allowing for minimal yet effective visualization of necessary information; catalog use in the form of cards indicating combined product categories (card design); restrained color use on luxury website pages; and interactive navigation, indicating active link states through color changes, geometric elements, hidden graphic symbols, etc. The design implemented 'ghost' buttons, which were transparent elements separated from the background by a thin frame that appeared when the user interacted with them.

The analysis demonstrated that the technical capabilities, driven by increased data transfer speeds, mainly due to mobile communications, allowed us to reproduce the shopping process in a real store as closely as possible, using higher-quality photos and a large number of videos to present the goods. Users could view products from different angles, zoom in on images to get a closer look at their features, view the same products in different colors, visually compare them with similar products, etc.

It has been determined that the design of the Apple website pages in 2014 reflects the trends of the sixth period of development of e-commerce website design and is made in a minimalist style. The home page of the website features a large high-quality photo of the iPad 2 and its name, presented in a sans serif font with elements of incompleteness, on a white background, emphasizing the innovation of the product. These elements occupy the majority of the web page. Additionally, the home page includes a horizontal top navigation bar with the logo in the upper left corner, links to the main product categories, and a hidden catalog. At the bottom of the page, there are videos showcasing the main advantages of the product and user reviews. The website page has a white and gray color scheme with a minimal number of blue color accents on the videos.

The seventh phase of e-commerce website design development started in 2015 and continues to this day. The analysis showed that its distinguishing features were realistic material design and a high level of graphics on website pages (Вакуленко, 2017; Васильєв, 2024). It is determined that the design of e-commerce websites has become more individual thanks to unique graphics, author's illustrations, photo-video materials, color, and font solutions. This is especially true for luxury e-commerce website design. The analysis showed that maximum interactivity and involvement of users in interaction with the interface became another characteristic feature of the modern design of e-commerce websites.

It has been revealed that the characteristic features of the design of e-commerce websites of this stage were: a tendency towards minimalism; a large amount of free space; the use of monochrome and achromatic color solutions of luxury segment website pages; the use of a catalog in the form of cards with the designation of large product categories, often in combination with other types of catalogs; use of fonts and headings as independent decorative elements; use of fonts without serifs; development of dark and light versions of websites; visualization of some information only during interaction; minimization of the navigation designation until it is completely hidden behind a button or icon in an inactive state; increase in video content, animation and interactive elements; 360° visualization of the image of goods in an interactive mode; the use of scroll jacking, which made it possible to see the necessary information on a larger scale thanks to moving the cursor along the visual part of the window in different directions; increasing the number of icons to indicate goods, actions, direction of movement, etc.; the use of three-dimensional, translucent or transparent buttons that changed during interaction; the use of figures with the effect of illumination; a combination of features of a flat and naturalistic visual image (semi-flat).

It has been found that the aesthetics of e-commerce website pages are built with a focus on user experience. Modern and high-quality websites maximize user interaction and are considered superior. The analysis indicates that the trends observed in previous years remain relevant for e-commerce websites in 2020-2024. These trends include the use of ample white space, simple icons, and microinteractions. Additionally, videos on product pages, bright color accents on a white background, and easy-to-read sans-serif typography are commonly employed.

Conclusions. The article identifies and characterizes the periods and stages of e-commerce website design development based on an analysis of literature sources and images of pages from the websites of global e-commerce leaders. The study is based on electronic archives that store web pages from over 30 years of Internet development. It has been determined that the various stages of e-commerce website design development were influenced by technological advancements in graphic information presentation, changes in graphic design, and fashion trends. It has been found that the development of web design technologies, information relay devices, social networks, and payment systems in the Internet environment has facilitated the development of e-commerce website design. The text characterizes the compositional and graphic features of each of the seven stages of the evolution of e-commerce website design. It discusses the compositional solution of web pages, the availability, design features, and placement of information blocks on website pages, color schemes, fonts used, availability of free space, presentation of graphic communication signs, and technologically determined user capabilities for visualizing goods.

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