Under the conditions of digitalization of all sectors of social production, the study of types and features of digital advertising and its media planning acquires special importance and requires in-depth analysis. The object of research is media planning of digital advertising campaigns. The problem is the lack of a holistic scientific and practical approach to the process of media planning of advertising campaigns in the digital environment. The main criteria for the systematization of digital advertising have been identified, and the relationship between its types for the purposes of media planning was substantiated. Based on the comparison of pricing models and key metrics of digital advertising, the digital sales funnel was substantiated as the basis of media planning. The connection of goals and objectives of digital advertising campaigns with digital marketing strategies was proven, with appropriate advertising tools and digital marketing tools suggested. The project approach to media planning of digital advertising campaigns was substantiated. This made it possible to detail goals and tasks for each stage, to highlight the components of media planning. The quantitative result of the study is a fragment of the media plan of an online store of an enterprise that specializes in the production and sale of branded clothing. It has been proven that the media plan is part of the process of preparing a digital advertising campaign. Therefore, it cannot be considered in isolation from other components of this preparation and further implementation of the advertising campaign. The need to use other digital marketing tools during digital advertising campaigns was substantiated. This, due to the synergy effect, could contribute to increasing their predictive efficiency. Practical use of the proposed approach to media planning of digital advertising campaigns will ensure cost optimization due to budget redistribution and improvement of their effectiveness

Keywords: digital marketing, advertising, digital advertising campaigns, strategies, GoogleAds, media planning, media plan

UDC 007:[004:659.11

DOI: 10.15587/1729-4061.2023.293074

MEDIA PLANNING OF DIGITAL ADVERTISING CAMPAIGNS

Tetiana lankovets

PhD, Associate Professor Department of Marketing State University of Trade and Economics

Kyoto str., 19, Kyiv, Ukraine, 02156 E-mail: tanyayankovec@ukr.net

Received date 20.09.2023 Accepted date 08.12.2023 Published date 28.12.2023 How to Cite: Iankovets, T. (2023). Media planning of digital advertising campaigns.

Eastern-European Journal of Enterprise Technologies, 6 (13 (126)), 42–53.

doi: https://doi.org/10.15587/1729-4061.2023.293074

1. Introduction

The spread of digital technologies on a global scale has led to changes in people's behavior and, accordingly, business models, strategies, and marketing of enterprises. The transformation of marketing into a digital one makes it possible to introduce the latest technologies and tools into the economic activity of enterprises. Such tools include digital advertising. Thus, starting from 2020, digital advertising spending exceeded half of the advertising budgets of businesses in the US, and it is predicted that the share of these expenses would grow every year. As a result of the pandemic caused by Covid-19, digital advertising has become available to a wide range of businesses [1].

Under such conditions, to ensure the effectiveness of digital advertising, media planning of digital advertising campaigns becomes important. Knowing the company's target audience and the ability to accurately target different groups of consumers in advertising systems minimizes risks. And the use of web analytics ensures the measurement of the effectiveness of advertising campaigns, which makes it possible to optimize costs and quickly redistribute advertising budgets. This helps save time and company resources.

Therefore, scientific research in the field of digital advertising and media planning is relevant. This will allow businesses to expand their ability to attract customers, increase sales due to the increase in the online audience, and increase the effectiveness of advertising campaigns and business activities.

2. Literature review and problem statement

The spread of digital technologies and the formation of a digital environment for people's lives and the functioning of enterprises has led to a change in consumer behavior and the customer's journey. Work [2] considers the detection of digital signals and the study of their influence on the change of the client's path. The authors argue that the ability of businesses to detect digital signals through digital technologies exhibited by consumers in a digital environment is a source of competitive advantage. However, the analyzed source does not indicate that under modern conditions the expectations of users regarding the confidentiality of their own data have significantly increased. People want transparency and more control over how their data is collected and used for personalized advertising and other purposes. Under these conditions, consumers' willingness to display digital signals in a digitally transparent world can be influenced by businesses delivering on brand promises and building long-term partnerships with their customers. This will contribute to the strengthening of customer trust and the expansion of technological capabilities of enterprises to collect information about customer preferences and actions, their segmentation and the formation of digital marketing strategies and personalized digital advertising campaigns, development of media plans.

The consequences of the global pandemic have significantly affected consumer behavior, the growth of purchases via the Internet and mobile applications. This has led to a change in the business models of enterprises and self-employed individuals and the spread of the use of digital advertising to

attract target audiences. Study [3] analyzes the spread of the use of digital media and digital advertising by both businesses and self-employed individuals. At the same time, the issue of redistributing advertising budgets during digital advertising campaigns to increase their effectiveness remains unresolved.

In study [4], when considering the establishment of connections between advertising and media, it was concluded that advertising would develop in the direction of combining traditional and digital media, while the dominant form of digital advertising is defined as search advertising. This thesis is debatable and requires additional research into the types and features of digital advertising, the goals, and tasks it solves. The choice of the type of digital advertising and media (channels) for its placement depends on many factors and is verified in practice for each specific enterprise using web analytics in real time. Such a check is preceded by drawing up a media plan and predicting the results of a digital advertising campaign.

Study [5] emphasizes that the increase in the online audience and the widespread use of BigData technology allows processing huge amounts of information that have become more accessible. At the same time, digital expansion has directly affected changes in the media planning process by complicating the process and organizational structure. Adaptation to digital changes requires the integration of offline and online strategies, changes in media planning procedures, and digital specialization of experts due to the updating of knowledge and skills, which requires the mastery of digital media planning tools. The conclusion of the authors of the study is logical, and the presented results are the basis for further research in the direction of specifying the stages of media planning and coordinating the relevant digital tools.

A significant amount of scientific research considers the psychological aspects of digital advertising. Study [6] compares the predictions of theories of dynamic attention, dynamic human-oriented communication systems in comparison with the theory of salience. The result of the study is the identification of visual limitations of digital video advertising. At the same time, the effectiveness of dynamic digital advertising, developed taking into account the identified limitations and the use of the proposed means, is not checked.

The result of study [7] is a description of strategies for increasing the effectiveness of six-second digital video advertising. At the same time, the authors consider only communicative efficiency, without economic efficiency.

The identified shortcomings are eliminated in [8], which proposes a simulation model of visual attention to dynamic marketing stimuli using an artificial neural network. Artificial intelligence provides accurate predictions, while the application of this model is limited to indirect marketing. The use of artificial intelligence based on machine learning algorithms is increasingly common in digital advertising. At the same time, performance forecasts are still often considered in isolation from media planning of digital advertising campaigns due to the lack of a holistic scientific approach to this process.

Research [9] considers media planning and advertising evaluation. However, attention is paid to media planning of traditional types of advertising, without taking into account the specifics of digital advertising, which meets the requirements of today.

In study [10], the authors focused on establishing the relationship between the perceived value of advertising and consumer intentions to make a purchase. A limitation of this study is the analysis of only video ads on YouTube. In addition, the authors stopped at the detection of purchase intentions and

did not bring to a logical conclusion the analysis of the purchase and the evaluation of the effectiveness of digital advertising campaigns on this platform. These shortcomings can be eliminated by developing a media plan and calculating forecast effectiveness. At the same time, the use of web analytics ensures flexibility and speed of corrective actions in the process of implementing the media plan and reallocating the advertising budget. The result is optimization of costs for conducting a digital advertising campaign and increasing its effectiveness.

The analysis and systematization of existing developments in digital advertising and media planning in the digital environment allowed me to draw the following conclusions:

- the digital transformation of all sectors of social life influenced changes in consumer behavior, which led to an increase in the number of Internet users in the global world;
- the increase of online audiences and the possibilities of BigData, artificial intelligence and machine learning technologies have influenced the development of digital advertising in providing personalized offers to target consumers, which improves the user experience and strengthens trust in brands;
- increasing the effectiveness of digital advertising campaigns is influenced by its forecasting based on the compilation of a media plan. At the same time, it is important to take into account the need to use digital media planning tools, including web analytics. This provides opportunities for optimization of digital advertising campaigns in the process of implementation in real time. The result is the saving of time and resources of enterprises.

Thus, the development of the theory and practice of media planning of digital advertising campaigns needs further research. The lack of a holistic scientific and practical approach to the process of media planning of advertising campaigns in the digital environment remains an unsolved problem. The use of this approach will make it possible to coordinate advertising tools and other digital marketing tools in the process of media planning. This will ensure an increase in the predictive effectiveness of digital advertising campaigns and the economic activity of the enterprise.

3. The aim and objectives of the study

The purpose of this study is to substantiate the project approach to media planning of digital advertising campaigns, which will ensure the synergy of the interaction of advertising and other digital marketing tools to increase predictive effectiveness.

To achieve the goal, the following tasks must be solved:

- to investigate the features of digital advertising and identify the main criteria for the systematization of digital advertising;
- to compare pricing models and key digital advertising metrics to identify cause-and-effect relationships;
- to justify the goals, tasks, and components of media planning of digital advertising campaigns, prove the feasibility of using other digital marketing tools along with advertising in the process of implementing advertising campaigns to ensure their predictive effectiveness.

4. The study materials and methods

The object of the study is the process of media planning of digital advertising campaigns. The subject of the research

is theoretical, methodological, and practical aspects of media planning of effective digital advertising campaigns. This paper puts forward a hypothesis that it is possible to apply a project approach to media planning, as a cyclical process. Each media plan, as a result of this process, is individual, and its implementation requires organizational support in order to fulfill it within the planned budget and time. Dividing the media planning process into stages using a project approach, setting goals and objectives consistent with digital marketing strategies, make it possible to reasonably choose digital advertising tools. In addition, their coordination with other digital marketing tools ensures, due to the synergy effect, predictive efficiency, and its increase. This is due to the use of web analytics during digital advertising campaigns, which makes it possible to optimize costs and redistribute the budget in favor of more effective advertising channels in real time. The developed media plan, as a result of media planning, performs a control function during the implementation of digital advertising campaigns.

The research is based on the use of the main provisions of the system approach, as well as the use of general and special scientific methods. Methods of content analysis and expert evaluations were used to select and formulate the main criteria for the systematization of digital advertising.

The use of general scientific methods of analysis and synthesis, induction and deduction in their dialectical combination made it possible to establish the relationship between the types of digital advertising for the purposes of media planning. These techniques were also used to establish causality between pricing models and key digital advertising metrics. Thanks to this, a digital sales funnel was substantiated to improve the predictive effectiveness of digital advertising and digital assets of the enterprise. The methods of analysis and synthesis, induction and deduction were also used to align the goals, objectives, and tools of digital advertising campaigns with digital marketing strategies.

A project approach was used to substantiate the media planning algorithm of digital advertising campaigns. The method of structural analysis was used to justify the components of media planning. A graphic method was used to visualize the proposed digital advertising systematization and media planning algorithm. The method of logical generalization was used to formulate conclusions.

5. Results of research into the process of media planning of digital advertising campaigns

5. 1. Classification of digital advertising

Digital advertising is one of the key digital tools for attracting targeted traffic to a company's website. According to the results of the research, the features of digital advertising compared to traditional advertising [5, 9–12] were highlighted: interactivity; wide coverage; targeting; measurability.

Interactivity involves inviting users to perform targeted actions through a call to action.

Broad coverage aims to reach a large number of Internet users, which increases the number of potential consumers and customers.

Targeting provides the ability to segment the Internet audience, identify the target audience and target advertising messages to it.

Measurability makes it possible to accurately measure the results of advertising in real time, using web analytics software systems, which increases its effectiveness. Web analytics capabilities also help improve website and mobile app performance. This generally affects the improvement of the efficiency of the enterprise.

During the research, the insufficiency of theoretical studies and the lack of a holistic approach to the systematization of digital advertising for the purposes of media planning were revealed. To solve this problem, methods of content analysis and expert evaluations were used to identify the most significant classification features of digital advertising. Founders and key specialists of agencies in the field of digital marketing and digital advertising with more than 10 years of experience acted as experts (N=12). The consistency of experts' opinions was checked using the concordance coefficient (W) and Pearson's test (χ^2). According to the results of calculations, W=0.672. For degrees of freedom 5 (n-1)and at the significance level α =0.05, the calculated value of χ^2 exceeds the tabular value (27.29>11.07), which confirms the agreement of experts' opinions. Based on the results of the research, the main features of digital advertising were identified and formulated. Systematization of types of digital advertising according to selected classification features is shown in Fig. 1. In the descriptive part of Fig. 1, the addition of two features is justified: according to the goals of media planning in the digital environment and according to content formats, which is important for drawing up a content plan that is consistent with the media plan. Both are formed within the framework of a digital marketing strategy and a corresponding communication strategy.

Below are the characteristics of the types of advertising systematized in Fig. 1.

By types of advertising creative. Contextual advertising is used to display text or image ads that appear on a search engine page alongside organic search results. In banner (media) advertising, banners are used - graphic extensions within the content of the website. Video advertising is aimed at using videos that are hosted on YouTube and other websites. Native advertising is adapted in terms of style and content to the informational content of the advertising platform, the feature of which is the advisory nature and the absence of a call to action. Values embedded in creative native advertising are perceived naturally by target consumers, and advertising information does not cause rejection [15]. The creative of the teaser advertisement contains provocative elements (image, title, short text) that intrigue and actively encourage the target consumer to go to the website page. Viral advertising, thanks to an unusual format, an interesting solution, etc., spreads rapidly according to the principle of "word of mouth" through social media [13].

By impact on users' senses and interaction. Text ads are text ads that are placed both online (for example, in search results) and offline on digital media (for example, on interactive digital screens in shopping centers). Visual advertising is presented in the form of graphic images. Audio advertising is placed in the form of recorded sound clips, jingles, which are placed on music services that provide legal audio content, podcast aggregators, services for listening to audio books (for example, Google Play, SoundCloud, Spotify, and others). Audiovisual advertising is advertising in the form of videos that are placed on YouTube, other websites, as well as on digital television and offline interactive screens. Interactive advertising involves the use of technologies that allow people to take action through impressions. In interactive advertising, application software is used, thanks to which

the necessary data is collected for the implementation of programmed actions in advertising. For example, by tracking the movements and gestures of people near the window, where an interactive screen with appropriate sensors is placed, they can be involved in an interactive game and create a desire to visit the store.

example, "quest rooms" or "intertop.ua"), for a specific audience (university students, young mothers, etc.), in a certain location, etc. Video campaigns aim to show video ads on YouTube and other websites. Advertising video campaigns are divided into image campaigns (increase brand awareness) and conversion campaigns (contribute to increased

According to the goals of media planning in the digital environment ■ Reputation Conversion ■ Image According to the I Based on ad creative By distribution channels effect on the senses types and interaction Search Networks Text Contextual Social Media Auditory Banner Influence marketing Visual Video ads Affiliate-marketing Audiovisual Native Email Interactive Teaser Dynamic remarketing I Viral **Push Notifications** П I By type of advertising I campaigns in Google I Ads By users' devices According to the digital technologies used П I Search engines I Smartphones Media Tablets Online Advertising Video campaigns П Notebooks Mobile Advertising Trading Interactive outdoor Computers For apps advertising Local Advertising using Smart VR/AR technologies With maximum efficiency Text Banner Video ads By formats for content planning purposes

Fig. 1. Classification of digital advertising for media planning purposes Note:* systematized and supplemented according to data [5, 9-14]

By types of advertising campaigns in Google Ads [16, 17]. Search campaigns involve showing text ads in search results to users who are actively searching for products and services on Google. In display campaigns, visually appealing image ads are displayed on websites that are included in the Google Display Network. Media Network sites, which number more than 2 million, cover more than 90 % of Internet users worldwide. Users are shown ads in a certain context (for

sales). Shopping campaigns are used to spread information about products on Google. Product ads appear in search results and on the Google Shopping tab. In app campaigns, ad serving is automatically optimized on search, Google Play, Recommendations, Google YouTube, and millions of other websites and apps using data from the app [17]. Local campaigns are used to display automatically optimized ads on search and display networks, as well as on Google Maps and YouTube. This encourages people to visit advertised shops and establishments offline. Smart campaigns are automated advertising campaigns. Top performing campaigns provide access to all channels from a single campaign with automatic bid optimization. It's a new type of goal-based ad campaign that gives conversion-first advertisers access to all of their Google Ads assets within a single campaign. The allocation of this classification feature of digital advertising is due to the leading position of Google in the world, as a search engine with its own web analytics, advertising, and other services. Google services are integrated with each other and with enterprise CRM systems. This provides data quality, speed, and convenience to track how digital advertising campaigns are performing in real time. The result is an improvement of the user experience, optimization of costs and an increase in the effectiveness of advertising campaigns [12, 18]. Within the types of advertising campaigns in Google Ads, there are advertising tools.

By distribution channels. On the search network, the advertisement is shown to the user next to the search results. Social media and Influence marketing (advertising with bloggers, opinion leaders and influencers) includes targeted advertising in social networks, advertising in messengers, etc. Affiliate marketing uses the Cost Per Action pricing model. The CRA network is a specialized service that acts as an intermediary between advertisers and webmasters.

The webmaster places the advertiser's advertisement either on his own site (blog, forum, etc.) or in other sources (social networks, search engines, etc.) and receives a reward for each targeted action of a potential consumer on the advertiser's site. This advertising model is also called affiliate or affiliate marketing (Affiliate-marketing) [16]. Through the e-mail box, the user sees advertisements when accessing the e-mail. Dynamic remarketing allows using machine learning algorithms to predict the digital behavior of consumers who have interacted with the site and show them products they have previously viewed. Small push messages appear in popup windows that the advertiser's website sends to the user's computer or mobile phone screen through the user's web browser. From a push notification, you can go to the site in one click. Web push notification technology works through web browsers on various operating systems. Mobile push notifications can only be sent by an application installed on a smartphone. These messages appear on the smartphone screen even when the person is not using the device and remain on the lock screen until the person deletes them. According to Apple, 94 % of iOS devices support sending mobile push notifications. Among devices with the Android operating system, this indicator reaches 99.4 %. According to Leanplum, users who receive push notifications spend 16 % more time in the mobile app. Mobile notifications make them 9.6 times more likely to make a purchase than people who do not receive notifications on their phone [18].

According to the types of user devices, advertisements for smartphones, tablets, laptops, and computers are distinguished. The format and size of the advertising creative for the corresponding screen sizes of different devices will depend on the type of device and even the specific model.

Internet advertising, mobile advertising, interactive outdoor advertising, advertising using virtual and augmented reality (VR/AR) technologies are distinguished by the digital technologies used.

All types of digital advertising are closely related. Thus, the selection of ad creative for an ad based on user sensory impact and engagement is based on the selected GoogleAds campaign type, ad channel(s), and user device(s). Similarly, the technologies used in digital advertising are closely related to user devices and advertising channels.

Based on the results of the research, the existing advertising campaigns are divided into three groups for the purposes of media planning. Image ones are aimed at spreading information and knowledge about the brand (Brand Image). Reputational ones are aimed at forming a positive brand reputation among customers (Brand Reputation). Conversion is aimed at sales (Performance Marketing). This distribution is due to the different goals and tasks of digital marketing strategies: image, reputation, and conversion, which are described in work [19], and the corresponding communication strategy.

There are a large number of types of digital advertising according to the above criteria, but they can be combined into three large groups of advertising based on content formats: text, banner, and video advertising. This division makes it possible to coordinate the media plan with the content plan, which are part of the communication strategy within the chosen digital marketing strategy implemented by the company.

Advertising campaigns are substantiated in accordance with the goals of media planning. Their optimization, along with the optimization of advertising channels, makes it pos-

sible to improve the user experience due to quick response. As a result, this ensures an increase in the effectiveness of digital advertising campaigns and the activity of the enterprise as a whole.

5. 2. Digital advertising pricing and performance

The effectiveness of digital advertising campaigns, among other factors, is directly influenced by the price of placing advertising in the digital environment, which refers to the expenses in the advertising budget of the enterprise.

In the process of pricing in digital advertising, not only the actions of users are taken into account but also the actions of Internet pages addressed to users. Historically, the terminology of digital advertising and pricing was formed in the early 2000s from the terminology of Internet banner advertising: impression, click, action. It was on these concepts that the promotion of Internet sites and any Internet pages in the network was based. There are different pricing models in digital advertising, depending on the goals and planned targeted actions. The main pricing models are shown in Fig. 2.

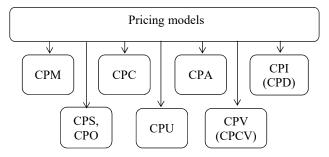


Fig. 2. Basic pricing models in digital advertising Note: compiled according to [5, 9, 20, 21]

CPM (Cost Per Mille (Cost Per Thousand)): price per thousand impressions. Display, as a concept, in digital advertising means one display of an advertising creative (n-d, banner) to a user when loading an Internet page inside a web browser. All marketing communication between the user and the Internet resource and, as a result, between the Internet resource and the advertiser who places this creative on it is based on the impression. CPM is the foundation of internet pricing. All other pricing models in digital advertising are based precisely on the price per thousand impressions, that is, they are derived from it.

CPC (Cost Per Click): price per click. Initially, digital advertising was positioned as a visual contact of users with advertising content, in particular, a banner in the early 2000s. Subsequently, with the increase in competition between advertisers on the network, due to the increase in the number of banner ads, the behavior of users began to change. People began to react less often to visual creatives and, accordingly, take certain actions. As a result, the 1000-impression pricing model became irrelevant because the impressions did not ensure that advertisers met their advertising goals. There was a need for advertisers to pay not for a display, but for a targeted action. This is how the pricing model with pay-per-click advertising creative was formed.

CPA (Cost Per Action): price per action. Just like CPC, CPA is based on cost per thousand impressions. First, the cost per click (CPC) is calculated from the cost per thousand impressions (CPM). Further, with the help of web analytics programs, the user's actions are tracked after he has clicked on the advertising creative and gone to one or another page

of the website. User action in digital advertising can mean any targeted action planned by the enterprise. Therefore, the price per action (CPA) is not only the transition directly to the site, but also the implementation of a specific targeted action within this site. For example, CPA can be the price for viewing a certain number of pages on the site that the user went to after clicking on the advertising creative. It can also be viewing an article, registering on the website, taking a test, registering for a webinar or conference, filling out a contact form, etc. And the advertiser pays for the performance of the user's specific target action.

CPI (CPD) (Cost Per Install (Cost Per Download)): price per installation (price per download). This pricing model is used if the advertiser's goal is to install one or another program on a personal computer, tablet, or smartphone. The rise in popularity of this pricing model is due to the emergence of mobile advertising and the promotion of mobile applications.

CPS (Cost Per Sale): cost per purchase. This pricing model is more complex than the previous ones and is used in e-commerce. The goal of online stores is to sell goods and increase sales efficiency, taking into account cost optimization. The purchase price is calculated inside special programs using complex calculations based on data collected by web analytics programs. Machine learning technology makes it possible to predict user behavior and the probability of whether a specific user will perform a certain targeted action and whether it will end with a purchase. A variant of this pricing model is CPO (Cost Per Order): price per order.

CPU (Cost Per User): price per user. This pricing model is used in the promotion of computer games. To calculate the price with the help of digital technologies, it is predicted how many users will remain in the game and the advertiser pays for a certain user. The price is determined using web analytics and multiple tests.

CPV (Cost Per View), CPCV (Cost Per Completed View): price per view, price per complete view. This pricing model is used for video ads within YouTube and in mobile video promotion.

The effectiveness of digital advertising is determined by the key metrics shown in Fig. 3.

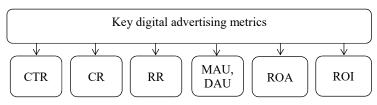


Fig. 3. Key metrics of digital advertising *Note: compiled according to [5, 9, 20, 21]*

CTR (Click Through Rate): is an indicator of clickability and the main indicator for all media planning for any promotion on the Internet. The CTR indicator characterizes the percentage ratio of clicks to advertising impressions. The semantic content of the clickability indicator is based on the fact that not all users who are shown an ad click. It is at the moment of the click that the CTR is calculated. In addition, the click-through rate is directly related to the CPC pricing model. The higher the value of the CTR indicator, the less the advertiser pays for a click on an advertising creative. The value of the clickability indicator also indicates the quality of creativity, which affects the interest of the target audience in the company's offer.

The average CTR of digital advertising campaigns is between 0.3 and 2.5 %. Smaller values indicate the inefficiency of the advertising campaign. Bigger ones are about highly effective campaigns. Effectiveness is ensured by well-designed advertising creatives and a competent approach to targeting and to parameters that can be tracked with the help of web analytics, based on the behavior of one or another segment of users. There are differences in CTR values related to ad format. For example, the clickability of standard advertising banners is 0.4 % on average, the clickability of HTML5 ads is 0.8–1.6 % [12, 20].

CR (Conversion Rate): conversion rate, which characterizes the ratio of targeted user actions to clicks. After the user has clicked on the ad creative, s/he goes to the landing page of the site that is advertised inside the digital ad (for example, a banner ad). After going to the site, the user either stays on it or leaves the site. If the user remains on the site, s/he can then perform certain actions. Just as not all users who are shown an ad click, not all users who go to a site take targeted actions on it. The CR conversion rate is related to the CPA pricing model. The costs incurred by the advertiser using this model depend on the value of the CR indicator. The higher it is, the lower the costs.

RR (Response Rate): response rate, which characterizes the ratio of secondary actions to primary ones. The first target action that the user performs after going to the site, staying on it, refers to the primary action (for example, switching from the landing page to another page of the online store and viewing a card with a description of the product). Subsequent actions of the user are secondary (for example, the user put the product he was viewing in the cart). Primary and secondary actions are targeted conversion actions planned on the site. The Response Rate indicator is not just a conversion indicator, like the Conversion Rate, it is an indicator of the response of the target audience and allows a deeper assessment of the quality of the site, the relevance of the value proposition, the quality of the content, etc. For online stores and other E-commerce sites, RR is related to the CPS pricing model.

On average, the value of CR and RR indicators should be 5% or more, while there are differences, depending on

the specifics of the type of economic activity of the enterprise and other factors. For an enterprise, it is important to monitor the value of CR and RR indicators dynamically to improve digital assets (site, application, content, design) and identify ways to improve the user experience on the consumer's digital journey [12].

MAU (Monthly Active Users) and DAU (Daily Active Users): monthly and daily active users, respectively. According to these indicators, those

users are counted who at least once a month and once a day opened a certain page of the website or visited a mobile site or a mobile application. User activity involves not only visiting the site, but also active use of it. There is a serious competition for active users in digital advertising. The effectiveness of advertising, marketing and overall business activities in the digital environment directly depends on the attraction of regular relevant users to the website or mobile application. The user must not only be constantly on the site, s/he must have this site in his/her bookmarks, s/he must be active on this site all the time, view content, read, engage in interactive interaction, etc. This is an important task of digital assets because it is what the entire digital advertising

ecosystem is built on. To calculate active users per month and day, predictive multiple parameters are calculated within the digital advertising system analytics.

ROA (Return on Investments in Advertising): return on investment in advertising. This indicator measures the effectiveness of all directions of investment in advertising in the case when the final target action is the purchase of a product or service [21]. The indicator is calculated using web analytics and mobile analytics systems.

ROI (Return on Investments): return of investments. This business indicator is used to evaluate the effectiveness of investments in a particular digital resource that provides its platform for advertising. Each digital resource (website, mobile site, mobile application) is a separate project for its creation, launch and development, which requires investments and has a certain payback period. All actions to attract traffic to a digital resource ultimately lead to the appearance of advertisers that place advertisements on it. All this is a complete ecosystem that allows the digital resource to function and develop.

The effectiveness of digital advertising is measured using web and mobile analytics programs, which, among other things, form and visualize sales funnels according to the classic AIDA model [21]. Fig. 4 shows the digital sales funnel and the relationship between pricing models and key digital advertising metrics. On the basis of measurable data, ways to improve the value proposition are justified, in terms of benefits for the consumer, digital assets of the enterprise (website, mobile site, application, content, design) and digital advertising creatives.

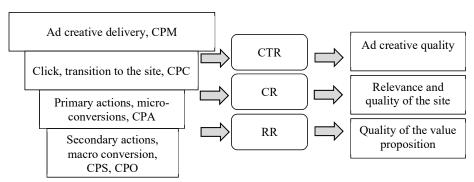


Fig. 4. Digital sales funnel in increasing the effectiveness of digital advertising and digital assets of the enterprise

The values of CTR, CR, RR indicators in the dynamics make it possible to identify, respectively, problems with advertising creatives, settings in advertising systems, targeting; the quality of the site, content, and design; the quality of the company's value proposition. Sales funnels make it possible to explore the user journey and, based on accurate objective data, identify the most converting touchpoints and cost optimization opportunities for the enterprise. The data obtained is the basis for planning future digital advertising campaigns.

5. 3. Media planning of digital advertising

The digital sales funnel presented above is the foundation of media planning in digital marketing and digital advertising.

The goals and objectives of digital advertising campaigns are directly related to digital marketing strategies and related communication strategies. The main goal of

digital advertising is to provide targeted traffic to the company's digital resource. Therefore, the main applied tasks of digital advertising are the development of advertising creative and the correct settings in advertising systems of the target audience (targeting). Therefore, it is important to know the target audience of the company and the path of the consumer in the digital environment, which makes it possible to take into account all channels of interaction and to select the most effective digital advertising tools for each of them. In addition, advertising campaigns are accompanied by the use of other digital marketing tools, which, due to the synergy effect during interaction with target consumers, ensures an increase in their effectiveness. The set goals and objectives of digital advertising campaigns, respectively, influence the choice of digital advertising and digital marketing tools that increase the effectiveness of digital advertising (Table 1).

The effectiveness of the use of digital advertising and digital marketing tools given in Table 1 depends on various factors:

- UI/UX website design to improve user experience;
- quality of site content and its technical serviceability;
- technical settings in accordance with the requirements of search engines;
 - accurate advertising settings for the target audience;
- conducting A/B testing of advertisements and landing pages;
 - use of web analytics to monitor advertising campaigns;
 - others.

Media planning, as the process of drawing up a media

plan, is important from the point of view of avoiding overspending of funds and time during an advertising campaign. A feature of a digital advertising campaign is the ability to measure its effectiveness in real time. This makes it possible to identify the most effective advertising channels and quickly redistribute the advertising budget and optimize costs. Hence, it is advisable to apply a project approach to media planning as a process, since each media plan is characterized by the same features as any project:

goals, time, scope of tasks, budget, uniqueness. Media planning as a process is cyclical. And each media plan, as a result of this process, is individual. The implementation of the media plan requires support in order to implement it within the planned budget and time. Fig. 5 shows the algorithm that I propose for media planning of digital advertising campaigns using the project approach.

Table 2 details goals and tasks by stages of media planning. The media plan, as a document developed in the process of media planning, is part of the process of preparing a digital advertising campaign; accordingly, it cannot be considered in isolation from other components of this preparation and further implementation of the advertising campaign. The developed media plan is coordinated with the content plan, in which content is developed and the calendar schedule for its publication is detailed for each digital marketing tool that complements advertising tools in the course of an advertising campaign [24].

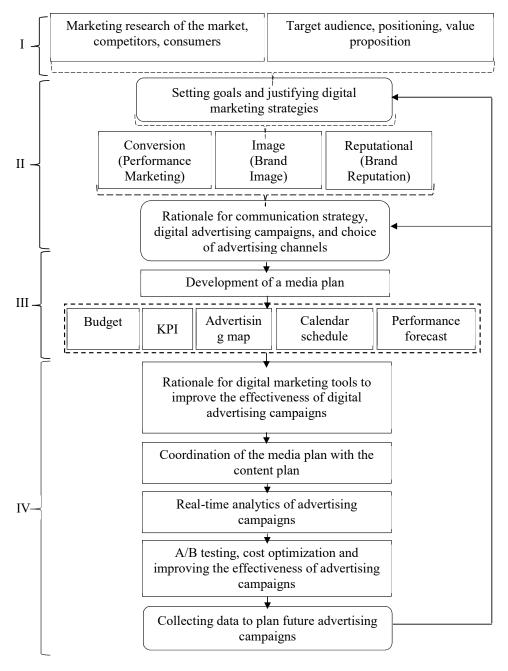


Fig. 5. Algorithm of media planning of digital advertising campaigns using the project approach: I — preliminary analysis stage; II — stage of setting goals; III — the stage of media plan development; IV — stage of media plan implementation

The components of media planning of a digital advertising campaign include [5, 9, 12, 20-24]:

- type of digital advertising campaign;
- digital advertising tools;
- targeting (setting the target audience in the advertising system);
- formats of advertising creatives, depending on the advertising system used (GoogleAds, Meta (Facebook/Instagram) and others);
- frequency of contact, which makes it possible to plan the number of impressions and coverage;
 - pricing indicators;
- forecast values of the number of conversions for advertising creatives (clicks), taking into account the planned

clickability (CTR indicator) for calculating the cost of a unique user (CPU);

- forecast values of the number of views of video advertisements, taking into account the planned viewing coefficient for calculating the viewing cost;
- estimated number and cost of planned macro-conversion target actions (transactions for the online store).

Tables 3, 4 give a fragment of the media plan (per month) in the part of substantiating the types of advertising campaigns for the purposes of media planning, advertising tools, budget allocation and performance forecast. This media plan was developed for the company's online store, which specializes in the production and sale of branded men's clothing. When substantiating the media plan, the method of budgeting based on goals and objectives was applied. When choosing advertising tools, it is taken into account that the most common advertising systems in the world and in Ukraine today are Google, YouTube, and Facebook.

For the planned year, the company set the goals of building brand awareness (indirectly through reaching 30% of the target audience) and obtaining net profit for the year in the amount of USD 250,000. An image and conversion strategy of digital market-

ing was chosen to realize the set goals. On their basis, communication strategies were developed, and image and conversion digital advertising campaigns were substantiated. This made it possible to justify advertising tools, targeting, and ad formats (Table 3).

Table 4 gives the distribution of the planned budget amount per month by advertising tools. This distribution was based on the forecast values of CPM, CPC, and CTR indicators. This made it possible to predict the number of ad conversions and the number of video ad views. This determined the cost per unique user who viewed the ad (CPU) and the cost per view. Based on this, a forecast of the number of transactions was made and the cost of one transaction was calculated.

Table 1

Alignment of goals, objectives, and tools of digital advertising campaigns with digital marketing strategies

Digital market- ing strategies	Goals of digital advertising campaigns	Objectives of digital advertising campaigns	Digital advertising campaign & digital marketing tools
Conversion	getting new customers and incentivizing existing customers to make repeat purchases; increase in sales	 lead generation; downloading; filling out contact forms; purchase 	 CRO (Conversion Rate Optimization); Social & display PPC (advertising in social networks, display (banner) advertising); SEO & search PPC (Search Engine Optimization, Contextual Advertising); E-mail marketing
Image	 dissemination of information and knowledge about the brand; raising awareness of the prob- lems that the brand solves and the solutions that are offered 	 brand awareness; introduction of new products to the market; new product options 	 Video & Display Ads (video advertising, display (banner) advertising); Native Ads (native advertising); Social PPC & SMM (Advertising and promotion in social networks); E-mail marketing
Reputational	promote new and existing consumers to the stage of brand advocates and promoters; to form a community around the brand and its products	- PR on the Internet; - brand reputation management; - feedback.	 - PR tools (PR tools: articles on authoritative sites; collecting and analyzing feedback in online media and social networks; prompt notifications (alerts); podcasts; Telegram bots); - SERM & ORM (managing brand reputation in search results; managing brand reputation on the network, this includes working with all Internet resources (social media, forums, mass media)); - SMM (Promotion in social networks)

Note: Compiled using [5, 9, 19, 20, 22-24]

Table 2 Goals and tasks of media planning based on the project approach

Stages of media planning	Goals and objectives of the stage						
Stage I. Preliminary analysis							
1. Analysis of the market, competitors	Formulation of the promotion concept taking into account market trends, identified strengths and weaknesses of competitors						
2. Analysis of the target audience	Distribution of the target audience into segments and characters, identification of advertis ing channels for interaction; formulation of the value proposition						
Stage II. Goal Setting							
3. Setting the goals of the advertising campaign	Formulation of media goals according to the SMART method, subordinated to the communication, marketing and business goals of the enterprise						
4. Selection of advertising channels and tools	Providing the best user experience and optimizing the advertising budget						
	Stage III. Development of a media plan						
5. Budget planning Justification and distribution of the budget for conducting an advertising campa							
6. Justification of KPI	Monitoring the effectiveness of advertising channels and advertising campaigns						
7. Building an advertising roadmap	Visualization of advertising channels with indication of priority, budget, cost of a unique user						
8. Drawing up a calendar schedule	Control of the timing of the advertising campaign						
9. Compilation of forecast efficiency	The ability to adjust the input data of the media plan during its execution, taking into account changes in the external environment in real time						
Stage IV. Implementation of the media plan							
10. Justification and coordination of digital tools	Increasing the effectiveness of the advertising campaign due to the synergy effect based on interaction with other digital marketing tools						
11. Data collection and analytics	Analysis of advertising campaigns in real time						
12. A/B testing	Optimizing costs and improving the effectiveness of digital advertising campaigns						
13. Data collection	Analysis of the results and collection of raw data for future advertising campaigns						

Note: compiled and supplemented by [5, 9, 18, 22–24]

According to the calculated data in Table 4, the transaction cost separately for advertising tools is less than the average check, except for video advertising on YouTube, the purpose of which is to spread information about the brand, which is successfully implemented due to a large reach of the target audience. Conversion ad campaigns have the lowest transaction cost and the highest number of transactions. This ensures the effectiveness of advertising campaigns presented in this media plan and, at the same time, with the use of video advertising, brand awareness is built.

In addition to those selected digital advertising tools given in Tables 3, 4, this media plan includes other digital marketing tools that enhance the predicted effectiveness: search engine optimization (SEO) and email marketing.

Search optimization is aimed at ensuring the technical serviceability of the website (online store) and the quality of the content, which generally affects the quality indicators of both the site and advertisements. This, in turn, ensures relevance and higher ad rankings, and improves the user experience of enterprise customers in the digital environment.

Campaign type	Tool	Targeting	Ads format		
Conversion	Google search advertising	Keywords/branded keywords/site content	Text ads/dynamic ads		
Image	Google Display Network	Specific audiences/topics/intents	Graphical and responsive ads		
Conversion	Performance Max	Special Intent Audiences/Remarketing	Adaptive ads/product cards		
T	V:1 1 V TI	Internal Control (1 and 1 / 4 and 1	In-stream		
Image	Video advertising on YouTube	Intents/interests/channels/topics	Bumper Ads		
Conversion		Interests/Remarketing	Native image		
Image	Facebook/Instagram	Interests/Intents/Special Intent Audiences/ Placements/Remarketing	Ring gallery		

Table 4

Mediaplan of the digita ladvertising campaign of the enter prisef or the production of branded men's clothing (second part)

	Forecast of display and reach			Conversion forecast		Views			Budget	Transaction			
Tool	Number of displays	CPM, UAH	Reach	CPU, UAH	Number of con- versions	CPC, UAH	CTR, %	Number of video views	Rate	Cost of viewing	Cost, UAH	Forecast of the number of transactions	Transaction cost forecast, UAH
Google search advertising	100,000	ı	_	ı	10,000	2.50	10.00	ı	-	I	25,000	150	166.67
Google Display Network	3,000,000	20.00	750,000	26.67	10,500	1.90	0.35	-	-	-	20,000	52.5	380.95
Performance Max	1,500,000	_		_	30,000	1.50	2.00	-	_	-	45,000	600	75.00
YouTube In-stream video advertising	500,000	45.00	250,000	90.00	750	30.00	0.15	175,000	35	0.13	22,500	7.5	3,000.00
Video YouTube Bumper Ads	500,000	35.00	250,000	70.00	1,000	17.50	0.20	470,000	94	0.04	1,7500	10	1,750.00
Facebook/Instagram	750,000	40.00	375,000	80.00	7,500	4.00	1.00	_	_	_	30,000	75	400.00
	1,000,000	16.00	500,000	32.00	2,000	8.00	0.20	_	_	ı	16,000	20	800.00
Total	7,350,000	-	2,125,000	-	61,750	_	-	645,000	_	-	176,000	192	_

Email marketing through the integration of e-mail distribution systems (ESP) with enterprise CRM systems is aimed at building long-term relationships with customers and sales

The forecast presented in the media plan for a month is extended to a planned year. During the implementation of digital advertising campaigns, with the help of web analytics, adjustments will be made in real time. The use of digital marketing tools makes this process manageable, flexible, and fast, which increases the likelihood of achieving the predicted effectiveness of digital advertising campaigns.

The construction of an advertising map and the development of a calendar schedule for the year, from the point of view of the project approach, ensure the control of the implementation of the correspondingly set goals within the framework of the planned budget, time, and scope of work.

Media planning for the planned year made it possible to predict the effectiveness of digital advertising campaigns: the budget was USD 84.1 thousand; coverage – 30 % of the target audience; number of transactions – 17,280; income – USD 728.3 thousand; net profit – USD 262.9 thousand; ROMI is 312.64 %.

6. Discussion of results of research into the process of media planning of digital advertising campaigns

Coordination of goals, objectives, tools of digital advertising and digital marketing in the process of media planning

ensures optimization of costs and improvement of the efficiency of the enterprise.

In the process of research, the lack of a holistic approach to the systematization of digital advertising for the purposes of media planning was revealed. Some types of digital advertising are reported in studies [5, 10–14]. I have conducted my own research with the involvement of experts, based on the results of which the types of digital advertising were systematized (Fig. 1). In practice, the relationship between types of digital advertising makes it possible to justify digital advertising campaigns and advertising tools in the process of media planning.

In the process of analysis of studies [5, 9, 20, 21], pricing models (Fig. 2) and key metrics of digital advertising (Fig. 3) were systematized. Based on this, the digital sales funnel was substantiated and its fundamental role in media planning was determined (Fig. 4). In practice, the application of the digital sales funnel makes it possible to substantiate the ways of improving the value proposition, digital assets of the enterprise and digital advertising creatives. At the same time, the issue of types of sales funnels for different types of digital advertising, depending on the specifics of the company's activity, requires a more in-depth study. Identifying patterns between the costs and effectiveness of digital advertising campaigns will enable businesses to increase the accuracy of predictive performance.

Taking into account previous studies of media planning and evaluation of the effectiveness of digital advertising [9, 10, 23], I have defined the main goal of media

planning of digital advertising campaigns. Such a goal is to forecast the effectiveness of advertising campaigns, taking into account the optimal values of the media plan indicators. The basic values of the planned indicators are taken on the basis of collected objective data and formed sales funnels based on the results of past advertising campaigns. Later, during digital advertising campaigns in real time, with the help of web analytics, the most effective advertising channels are revealed. This makes it possible to quickly redistribute the advertising budget and optimize costs. The controllability of this process is ensured by the application of a project approach to media planning, since each media plan is characterized by the features of the project: goals, time, scope of tasks, budget, uniqueness. The study proposed an algorithm for media planning of digital advertising campaigns using a project approach (Fig. 5). On the basis of this algorithm, the goals and objectives are detailed according to the stages of media planning (Table 2). In practice, this makes it possible to justify the components of the media plan. The quantitative result of the application of this approach is represented in a fragment of the media plan of the online store of the enterprise, which specializes in the production and sale of branded men's clothing (Tables 3, 4).

In addition, in the process of researching media planning and evaluating the effectiveness of digital advertising [9, 10, 23], I have summarized and reconciled the goals, tasks, and tools of digital advertising campaigns with digital marketing strategies (Table 1). A media plan cannot be developed separately from other digital marketing tools in the process of preparing and implementing an advertising campaign. Media planning takes place as part of the development and implementation of the company's digital marketing strategies. This ensures the systematicity of this process and controllability of the predictive effectiveness of digital advertising campaigns. Therefore, it is important in further research to focus on identifying patterns and relationships between digital advertising tools and other digital marketing tools. The established connections will make it possible to systematize the researched tools in order to substantiate the most optimal set of them in accordance with the set goals and objectives of digital marketing strategies and media planning of digital advertising campaigns.

The practical significance of the current research is the application of the project approach to media planning of digital advertising campaigns based on the digital sales funnel. This creates conditions for the justification of goals, tasks, tools of digital advertising and digital marketing. This approach ensures cost optimization in the process of conducting advertising campaigns in real time and increasing their effectiveness.

The limitation of the proposed approach is the large amount of objective data in the process of media planning, the lack of linear relationships and the relative accuracy of predicting the effectiveness of digital advertising campaigns.

The shortcomings of this study include not taking into account the risks of digital advertising campaigns in the process of media planning.

Based on this, the prospect of further research into this area is to eliminate the proposed limitations and shortcomings. In the future, it is advisable to devise a methodology based on the study of economic and mathematical forecasting models. This will make it possible to minimize the risks when determining the forecast performance, which will increase the probability of its achievement.

7. Conclusion

- 1. Digital advertising has specific characteristics, compared to traditional advertising: interactivity, wide coverage, targeting, measurability. According to the results of the research, the main criteria for the systematization of digital advertising were identified and formulated, which were supplemented by two: for the purposes of media planning in the digital environment and for formats for the purposes of content planning. The systematization of digital advertising makes it possible to establish relationships between different types of advertising, and the proposed additional criteria make it possible to justify digital advertising campaigns and corresponding advertising tools, in the process of media planning, and to coordinate them with digital marketing strategies. This ensures the controllability of the process of conducting advertising campaigns and their effectiveness.
- 2. As a result of the comparison of pricing models and key metrics of digital advertising, causal relationships were established. This made it possible to justify the digital sales funnel as a tool for improving the effectiveness of digital advertising and the company's digital assets, which include website, mobile site, mobile application, content, design. Using a digital sales funnel makes it possible to identify areas for improvement in your advertising, digital assets, and value proposition.
- 3. The application of the project approach to media planning made it possible to distinguish the stages of media planning: preliminary analysis, setting goals, development of a media plan, implementation of a media plan, and to formulate the goals and tasks of media planning for each stage, to justify the components of the media plan. Alignment of the goals, tasks, and tools of digital advertising campaigns with digital marketing strategies makes it possible, due to the synergy effect from the use of other digital marketing tools, to strengthen the predictive effectiveness of digital advertising campaigns.

Conflicts of interest

The author declares that she has no financial or non-financial conflicts of interest regarding this paper; has no relationship with any government agency, commercial or non-commercial organizations that might have an interest in presenting this point of view.

Funding

The study was conducted without financial support.

Data availability

All data are available in the main text of the manuscript.

Use of artificial intelligence

The author confirms that she did not use artificial intelligence technologies when creating the presented work.

References

- 1. Schweidel, D. A., Bart, Y., Inman, J. J., Stephen, A. T., Libai, B., Andrews, M. et al. (2022). How consumer digital signals are reshaping the customer journey. Journal of the Academy of Marketing Science, 50 (6), 1257–1276. doi: https://doi.org/10.1007/s11747-022-00839-w
- Williams, R. (2020). Digital Ads account for majority of media spending for first time, Group M says. Marketing Dive. Available at: https://www.marketingdive.com/news/digital-ads-account-for-majority-of-media-spending-for-first-time-groupm-s/591509/
- 3. Prokopenko, O., Sadivnychyi, V., Batyrbekova, Z., Omelyanenko, V., Kostynets, Y., Iankovets, T. (2022). The role of digital (social) media in the management of innovation projects at the company and self-employment levels. Financial and Credit Activity Problems of Theory and Practice, 4 (45), 165–174. doi: https://doi.org/10.55643/fcaptp.4.45.2022.3827
- Koslow, S., Stewart, D. W. (2021). Message and media: the future of advertising research and practice in a digital environment. International Journal of Advertising, 41 (5), 827–849. doi: https://doi.org/10.1080/02650487.2021.1954804
- 5. Perlado-Lamo-de-Espinosa, M., Papí-Gálvez, N., Bergaz-Portolés, M. (2019). From media planner to media expert: The digital effect in advertising. Comunicar, 27 (59), 105–114. doi: https://doi.org/10.3916/c59-2019-10
- Wooley, B., Bellman, S., Hartnett, N., Rask, A., Varan, D. (2022). Influence of dynamic content on visual attention during video advertisements. European Journal of Marketing, 56 (13), 137–166. doi: https://doi.org/10.1108/ejm-10-2020-0764
- 7. Campbell, C., Pearson, E. (2020). Strategies for More Effective Six-Second Video Advertisements. Journal of Advertising Research, 61 (3), 260–275. doi: https://doi.org/10.2501/jar-2020-023
- 8. Rumpf, C., Boronczyk, F., Breuer, C. (2020). Predicting consumer gaze hits: A simulation model of visual attention to dynamic marketing stimuli. Journal of Business Research, 111, 208–217. doi: https://doi.org/10.1016/j.jbusres.2019.03.034
- 9. Guggenheim, B. (1984). Advertising Media Planning and Evaluation: Current Research Issues. Current Issues and Research in Advertising, 7 (2), 19–38. doi: https://doi.org/10.1080/01633392.1984.10505365
- 10. Anubha, Shome, S. (2021). Customer Engagement and Advertising Effectiveness: A Moderated Mediating Analysis. Journal of Internet Commerce, 20 (4), 409–449. doi: https://doi.org/10.1080/15332861.2021.1955324
- 11. Kim, J. (Jay), Kim, T., Wojdynski, B. W., Jun, H. (2022). Getting a little too personal? Positive and negative effects of personalized advertising on online multitaskers. Telematics and Informatics, 71, 101831. doi: https://doi.org/10.1016/j.tele.2022.101831
- 12. Deiss, R., Henneberry, R. (2020). Digital Marketing For Dummies. John Wiley&Sons, Inc.
- Lee, H., Cho, C.-H. (2019). Digital advertising: present and future prospects. International Journal of Advertising, 39 (3), 332–341.
 doi: https://doi.org/10.1080/02650487.2019.1642015
- 14. Dykha, M., Ustik, T., Krasovska, O., Pilevych, D., Shatska, Z., Iankovets, T. (2021). Marketing Tools for the Development and Enhance the Efficiency of E-Commerce in the Context of Digitalization. Studies of Applied Economics, 39 (5). doi: https://doi.org/10.25115/eea.v39i5.5234
- 15. Wojdynski, B. W., Evans, N. J. (2019). The Covert Advertising Recognition and Effects (CARE) model: Processes of persuasion in native advertising and other masked formats. International Journal of Advertising, 39 (1), 4–31. doi: https://doi.org/10.1080/026 50487.2019.1658438
- 16. Mediynye obyavleniya i kontekstno-mediynaya set' Google. Available at: https://support.google.com/google-ads/answer/2404190
- 17. Kak vybrat' podhodyashchiy tip kampanii. Available at: https://support.google.com/google-ads/answer/2567043
- 18. Berestetska, O., Iankovets, T., Orozonova, A., Voitovych, S., Parmanasova, A., Medvedieva, K. (2023). Using Crm Systems for the Development and Implementation of Communication Strategies for Digital Brand Management and Internet Marketing: eu Experience. International Journal of Professional Business Review, 8 (4), e01613. doi: https://doi.org/10.26668/businessreview/2023.v8i4.1613
- 19. Iankovets, T. (2022). Strategic management of digital marketing. Scientia·Fructuosa, 145 (5), 93–112. doi: https://doi.org/10.31617/1.2022(145)06
- 20. Spilker-Attig, A., Brettel, M. (2010). Effectiveness of online advertising channels: a price-level-dependent analysis. Journal of Marketing Management, 26 (3-4), 343–360. doi: https://doi.org/10.1080/02672571003594663
- 21. Jeffery, M. (2010). Data-Driven Marketing: The 15 Metrics Everyone in Marketing Should Know. Wiley, 320.
- 22. Afanasieva, K. O., Zozulov, O. V. (2019). Developingpromotional strategy in cyberspace. Economic Bulletin of National Technical University of Ukraine «Kyiv Polytechnical Institute», 16, 270–287. doi: https://doi.org/10.20535/2307-5651.16.2019.182728
- 23. Radkevych, L. A. (2016). Organizing goals and objectives of media planning in advertising management. Prychornomorski ekonomichni studiyi, 12-2, 26–32. Available at: http://www.bses.in.ua/journals/2016/12-2_2016/6.pdf
- 24. Tanasiichuk, A. (2023). Development of brand communications in the digital environment. Transformational Economy, 3 (03), 45–49. doi: https://doi.org/10.32782/2786-8141/2023-3-8