

Digital Transformation of Advertising: Trends, Strategies, and Evolving User Preferences in Online Advertising

Zimeng Zhou *

Pickering College, Ontario Newmarket, L3Y 4X2, Canada

* Corresponding Author Email: joannzhou25@pickeringcollege.on.ca

Abstract. This study discusses the evolving trends in online advertising, diverse marketing models, and changing user needs. From the early development of the Internet, especially in the early 1990s, to the emergence of numerous advertising formats, online advertising has become an integral part of modern marketing. Different types of online advertisements, such as banner ads, pop-up ads, video ads, native ads, search engine ads, and social media ads, fulfill different needs of advertisers. In addition, the study also explores diverse marketing models for online advertising, including pay-per-click, pay-per-thousand-displays, pay-per-action, affiliate marketing, targeted ads, and video ads, which provide more choices for advertisers. In terms of user characteristics and needs, as technology continues to evolve, user reliance on mobile devices increases, the use of ad-blocking and anti-advertising technologies rises, concerns about data privacy increase, social media becomes an important channel for advertising, and data analytics and ad-tracking technologies become increasingly critical. A user's age, gender, geographic location, interests, purchase history, device and platform, social interactions, and privacy preferences are important in creating user profiles and target market analysis. In summary, online advertising plays a key role in the modern marketplace, providing advertisers with global advertising opportunities and the need to continually adapt to market and technological changes to maximize ad effectiveness.

Keywords: Online advertising, Marketing models, User characteristics, Evolution.

1. Introduction

The transition from physical to online advertising represents a significant shift in how businesses and marketers reach their target audiences. The birth of online advertising is a long historical process involving the continuous development of technology, business and media. The roots of online advertising can be traced back to the early days of the Internet, primarily in the 1990s [1]. At that time, the Internet was mainly used by academic institutions, governments and some start-up companies, and the user scale was relatively limited. In 1994, HotWired became the first company to display banner ads on its website. These banner ads appear as images and text at the top or bottom of a web page, and clicking on the ad redirects the user to the advertiser's website. This marked the beginning of online advertising, although click-through rates for ads were very high then. The development and evolution of online advertising is a natural result of the Internet and digital technology. It has become a major component of modern advertising, providing advertisers with more opportunities to interact with their audiences and promoting the growth of the Internet economy.

There are many types of online advertising, each with different characteristics and application scenarios to meet the needs of different advertisers. Here are some common types of online advertising. The first is banner advertising, one of the earliest forms of online advertising [2]. It usually appears as a horizontal rectangular image or Flash animation at a web page's top, bottom, or side. They are often used for branding and directing traffic to the advertiser's website. The second is that pop-up ads are advertising windows that pop up suddenly when users click on web content [3, 4]. They are sometimes seen as advertising that annoys users but can also effectively get attention. Video ads are presented in the form of videos, usually played on online platforms such as YouTube and TikTok and can also be embedded in video content on other websites. Video ads can include pre-roll ads, played before the video starts, mid-roll ads, played during the video, and post-roll ads, played after the video ends. Native ads match the content style and format of a web page or app, making it look more like a piece of content than an ad. This ad type is designed to provide a better user

experience and usually comes as promoted content. Search engine advertising is displayed on search engine results pages, usually based on the user's search keywords. The most famous search engine advertising platform is Google Ads. Social media platforms like Facebook, Instagram, Twitter, LinkedIn, etc. allow advertisers to place ads in users' social media streams. These ads can be targeted based on user interests, behavior and demographic information. Interactive ads encourage users to interact with the ad, often including games, polls, surveys or other interactive elements. This ad type can increase user engagement and brand recall. These are some common types of online advertising, and advertisers can choose the ad format that suits their needs based on their goals, audience, and budget. With the continuous development of technology, online advertising is also constantly evolving, and new advertising forms and strategies will appear in the future.

2. Marketing Models and Strategies

There are various marketing models for online advertising, and advertisers can choose the model that suits their needs based on their goals, audience, and budget. For example, Pay-Per-Click, also called PPC. Under this model, advertisers only pay for the number of times their ads are clicked. This is one of the most common patterns in search engine advertising, such as Google Ads. Advertisers set a maximum bid for each click, bid for keywords or ad positions, and then pay based on actual clicks. There are many marketing models. Paid impressions, or CPM, pay advertisers according to the number of times their ads are displayed on a web page [5, 6]. This is typically used in brand advertising to increase brand awareness without necessarily requiring users to click on the ad., and Pay-Per-Action, PPA, in which advertisers only pay when users perform specific actions, such as registering, purchasing, filling out forms, etc. This requires ad networks to be able to track user behavior and ensure ads translate into actual sales or conversions. Affiliate marketing is a partnership between advertisers and content creators such as websites, social media or blogs, sharing sales revenue or providing a fixed fee to display ads. This model is usually managed through dedicated affiliate marketing networks.

There's also targeted advertising, a model that involves showing ads to a specific target audience, often based on a user's interests, location, search history and other behaviors. This can be accomplished through the ad network's advanced targeting tools. There are also video ads that often appear now. Usually, on video platforms, ads can be sold in different modes, including pre-, mid-, and post-roll ads. Advertisers may pay per click, impression, or view time. Social media advertising is also a popular marketing model now [7]. Advertisers can purchase ads on social media platforms and choose payment models based on different goals, such as paying per click, impression, interaction or conversion. Presented to the target audience.

Spotify is a music streaming platform that provides users with music, podcasts and other audio content. Spotify has many advantages that make it stand out among major apps. For example, Spotify provides a free music streaming service. Although there are ads, users can choose to pay to upgrade to the ad-free Premium version. Spotify is available on various operating systems and devices, including iOS, Android, Windows, and macOS. So, it is suitable for people of all systems. Spotify cooperates with some artists and producers to provide exclusive music and content to attract users. Spotify uses powerful algorithms to analyze users' listening history and preferences, provide personalized music recommendations, and help users discover new music. But Spotify also has many weaknesses, for example, the availability of Spotify varies in different countries and regions, and some music may be subject to copyright restrictions and cannot be played in specific regions. For example, in China, only a few people know this software. The streaming music market is highly competitive, and Spotify must compete with other platforms, such as Apple Music and Amazon Music, for users and exclusive content. While Spotify offers a free version, upgrading to the Premium version requires a subscription fee, which may be an expense for some users. Spotify has a broad user base and powerful features in the music streaming space, but it also faces some challenges from competitors, copyright issues, and economic challenges. Users can consider these strengths and

weaknesses based on their needs and preferences to choose Spotify or other music streaming services. There are some common Spotify strategies and practices for marketing on the web. Their success is attributed to Internet marketing. Spotify extensively uses social media platforms such as Facebook, Instagram, Twitter and YouTube to promote its services through advertising and interesting content. They create beautiful video ads, posts, and stories to attract users' attention. Spotify encourages users to create content related to their music and podcasts and share it on social media. They also launch contests and events on user-generated content on the platform to increase user engagement. Spotify partners with well-known music artists, podcast creators, brands and other media companies to launch exclusive content. This helps attract new users and provides a unique experience to existing users. Spotify provides business advertising solutions, including audio ads, video ads, and sponsored playlists. They use their platform to promote these advertising services to potential customers. It fosters user community through collaborative playlists, and follower counts for artists and playlists, and social sharing options. Building this community encourages users to engage more with the platform [8]. Spotify has hosted live events, such as concerts and exclusive album launches. They also promote their platform through traditional offline advertising methods such as billboards and public transportation ads. It's worth noting that Spotify's marketing strategy will likely evolve to adapt to changes in the music industry and consumer behavior. This is why Spotify succeeds.

3. Evolution of User Characteristics and Needs in Online Advertising

User characteristics and needs of online advertising have changed with time and technology development. Digitalization, social media, mobile devices, and more trigger these changes. With the popularity of smartphones and tablets, users are increasingly using mobile devices to browse the Internet and use applications. Therefore, ads must adapt to various screen sizes and presentation methods on mobile devices. Users are increasingly turning to ad blockers and anti-ad technology to reduce the intrusion of online ads. This forces advertisers to be more innovative in creating more engaging ads to address this challenge. Also, users are becoming more privacy-conscious about their data and want greater control over what advertisers collect and use. Some regulations, such as Europe's GDPR and California's CCPA, require advertisers to be more transparent with user data [9].

Social media platforms such as Facebook, Instagram, Twitter and TikTok have become important channels for advertisers [10]. Users share and consume content on these platforms, so advertisers are increasingly placing ads on social media. This also makes users increasingly prefer to purchase and learn about products online. Advertisers want to know more about the effectiveness of their ads, so data analytics and ad-tracking technology have become critical. Users are increasingly concerned about the impact of advertising on their behavior and decisions. Changes in user characteristics and needs for online advertising reflect the development trends of the digital age, including mobility, personalization, privacy protection, social media influence, and visual and data-driven advertising. Advertisers must pay close attention to these changes to adapt to changing user behaviors and expectations to communicate their advertising messages effectively. Ser characteristics for online advertising can be described based on different factors and criteria. The age of the user is an important feature. Users of different age groups may have different interests, purchasing abilities, and online behaviors. Advertisers often target their audiences based on age. The user's gender is also a key feature. Certain products and services may be more popular with male or female users, so that ads may be targeted based on gender. A user's geographic location can help advertisers target ads to specific regions or cities to meet regional needs or promotions. Interests and hobbies can be determined through online activities, search history, and social media interactions. Advertisers can use this information to deliver relevant advertising. A user's purchase history and behavior can reveal their shopping preferences and habits. This information is valuable for marketing relevant products and services. The device and platform used by the user (such as a PC, mobile phone, tablet, or operating system) can affect the presentation and format of the advertisement. For example, ads on mobile devices may require less screen real estate. Users' level of interaction and behavior on social

media, such as likes, comments, shares, etc., can be used to determine how responsive they are to ads. Users' privacy preferences regarding their data are also a key feature. Some users may be willing to share more information, while others may be more privacy conscious. Some users are more concerned about online security and privacy, and they may use an ad blocker or VPN to protect themselves from potential ad tracking. These user characteristics are often used to create user profiles and target market analysis to help advertisers better target and tailor their ads. However, user characteristics may change over time, so advertisers need to monitor and adjust their target audience strategies continually. In addition, changes in privacy regulations may also impose stricter requirements on advertisers' collection and use of user profile data.

4. Pros and Cons of Online Advertising in a Dynamic Market Environment

Online advertising has many advantages and disadvantages, depending on the advertiser's goals, audience, and market environment. The advantage of online advertising is ad targeting and personalization. Online advertising allows advertisers to locate their target audiences and provide personalized advertising content accurately. This can increase the effectiveness of your ads as they are more likely to reach interested people. Online advertising provides real-time data and analysis tools, and advertisers can monitor advertising effects at any time and make real-time adjustments to obtain the best results. Online advertising often has flexible budget options, and advertisers can control advertising costs according to their budget and choose different payment models, such as pay-per-click (CPC) or pay-per-thousand impressions (CPM). The global nature of the Internet means Advertising can reach international audiences, helping with international market expansion and brand exposure. Online advertisements can contain various interactive elements, such as links, buttons, and forms, to encourage users to interact with the advertisement and increase participation. Online advertising offers various ad formats, including text, image, video, and social media ads. Advertisers can choose the format that best suits their target audience. Online advertising can quickly obtain user feedback, helping advertisers better understand user needs and optimize advertising content and strategies. Advertisers can accurately target advertisements based on various factors such as geographical location, interests, and search history, improving advertisements' relevance and effectiveness.

Similarly, online advertising also has many disadvantages, More and more users are using ad blockers and anti-ad technology, which reduces ad exposure and click-through rates. Users' privacy concerns about their data have increased, and advertisers must comply with stricter privacy regulations, which may limit their ad targeting capabilities. Overexposure and intrusive advertising may offend users and even lead to advertising fatigue, affecting brand reputation. Nowadays, almost all brands will have online advertisements. Hence, the advertising market on the Internet is highly competitive, and advertisers need to improve their creativity and advertising effectiveness to stand out constantly. There are also some ad fraud issues today, such as click fraud and ad view fraud, which can lead to advertisers wasting their budgets. Overall, online advertising offers many advantages, such as targeting capabilities, real-time data, and interactivity, but also faces disadvantages, such as ad blocking, privacy issues, and fierce competition. Advertisers need to weigh these factors to develop effective online advertising strategies and continuously adjust to meet changing market and user needs.

5. Conclusion

The development trend of online advertising in the next ten years will be affected by many factors, including technological innovation, social trends and market competition. Firstly, artificial intelligence and machine learning will continue to play a key role in online advertising. AI can be used for more precise ad targeting, personalized recommendations, ad creative optimization, and automation of anti-fraud and ad delivery. As concerns about data privacy continue to increase, more

data privacy regulations are likely to emerge. Advertisers will need to be more transparent about their handling of user data to comply with regulations and find new ways to target audiences without invading privacy. Advertisers will explore these new forms as AR and VR technologies mature to provide users with a more immersive advertising experience. Perhaps in the future, users will experience advertising more immersively, as if they are there. Interactive advertising will continue to develop, users can participate more deeply in advertising content, and augmented reality technology will provide more possibilities for creative advertising. In the future, advertisers may get users interested in a brand's social responsibility. Advertisers will pay more attention to sustainability and social issues and integrate these values into their ads. The next decade will see online advertising evolve to meet user needs and achieve greater advertising effectiveness.

Online advertising is a form spread through the Internet and has become an indispensable part of modern marketing. Its core features include ad targeting, personalization, diverse formats, and real-time data analysis. First, online advertising takes full advantage of the wide reach of the Internet and can reach audiences worldwide. Through precise ad positioning, advertisers can display their ads to the most potentially interested audiences and improve the effectiveness of their ads. Personalized targeting increases the click-through rate of your ads and enhances the user experience. Secondly, online advertising provides a variety of advertising formats, including text, images, videos, social media ads, etc. This enables advertisers to choose the ad format that best suits their target audience and marketing objectives. Social media advertising plays an important role, allowing advertisers to integrate advertising content into users' social interactions to increase interactivity and engagement. In addition, real-time data analysis tools for online advertising allow advertisers to monitor advertising performance at any time and make real-time adjustments to obtain the best results. This traceability helps save advertising budgets and improve ROI. However, online advertising faces challenges, including privacy issues, ad blocking, and fierce competition. User concerns about data privacy have led to stricter privacy regulations and ad tracking restrictions. Advertisers need to be more transparent about handling user data to comply with regulations. At the same time, ad blocking and anti-ad technology reduce ad exposure, posing a challenge to advertisers. In general, online advertising plays a vital role in modern marketing, giving full play to the advantages of the Internet. Still, it also needs to constantly adapt to changes in the market and technology to maximize advertising effects. As technology advances and user behavior changes, online advertising will continue to evolve and develop to meet the needs of advertisers and users.

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