

The Impact of Artificial Intelligence (AI) Powered Electronic Advertising and Social Influencers on Consumer Behavior In the Digital Environment

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Abstract:

This study aimed to highlight the impact of AI-powered digital advertising and social influencers on consumer behavior in the digital environment. This topic is of great importance in light of the developments in technology and information enabled by the internet, which have made the world a small global village and transformed ordinary citizens into digital citizens. It has also led to a series of changes in the media and communication, which in turn contributed to the production and reproduction of a new conceptual arsenal such as electronic advertising, artificial intelligence, and social influencers. These concepts have affected consumer behavior in the virtual environment, Electronic advertising is considered one of the most important pillars of public and private institutions in the field of marketing, promoting their services and products, benefiting from the advantages of artificial intelligence applications and the popularity of social influencers on social media sites, so it has become a symbolic capital for institutions within the virtual space .

Keywords: electronic advertising; artificial intelligence; social influencers; consumer behavior; digital environment.

Introduction :

The digital and technological revolution has brought about decisive developments in many areas of life, and its impact has crystallized in a set of technologies and communication tools that represent a modern outlook on social change. The continuous developments we are experiencing today in the fabric of our lives, and in all economic, social, and cultural aspects, are the result of tremendous progress in the fields of information, digitization, and technology.

These rapid technological developments in communication and information technology have also led to changes in the roles that individuals play within their communities, especially since individuals used to rely on traditional means to obtain content and form relationships, but with these developments in media and communication, they have become producers of content and publications. Thanks to the internet and its diverse services, all groups, regardless of age and level, can now access this virtual space to satisfy their needs and desires.

Social media sites are one of the outputs of second-generation Internet services, which have reduced time and space and allowed individuals to access news and information, interact, post content, and share videos and photos across various sites, such as Facebook, Instagram, YouTube, and TikTok.

This increasing digital development in the cognitive and electronic spheres has led to the production and reproduction of a new conceptual arsenal, such as electronic advertising, artificial intelligence, and social influencers. Electronic advertising is considered a new form of traditional advertising in the field of marketing products, goods, and services. This model, supported by artificial intelligence applications and social influencers, allows consumers in the digital environment to access the largest amount of information they are looking for regarding the product or company behind the brand, through the use of voice technology for smart

applications or smart search, or through the feedback feature available on various social media sites. They can also compare similar products and services in terms of product quality and prices. Perhaps one of the most prominent features that distinguishes electronic advertising from traditional advertising is the transition from the audience being a passive recipient to an active recipient with the ability to choose and interact with the advertiser through the feedback feature.

alking about electronic advertising today, in light of the increasing number of goods and services offered in local and international markets, and with the developments in modern technology and the Internet, leads us to understand the extent to which brands, companies, and institutions of all kinds have embraced the idea of electronic advertising in its new form, which is based on using the popularity of social influencers and artificial intelligence to promote their goods and products, especially with the increase and expansion of the use of electronic spaces that attempt to influence consumer needs, attract more new customers, gain their support, and thereby increase sales, whether through legal means or through misleading advertising.

From this perspective, it is important to highlight the concept of electronic advertising by defining it and identifying its characteristics, focusing on the extent of the impact of artificial intelligence, which is considered the technology of the age, and social influencers, who are considered the invisible soldiers of social media, on consumers in the digital environment. This is what we will try to identify.

1. Conceptual introduction to the terms used in the study

1.1 Definition of electronic advertising in conventional terms:

Electronic advertising is defined in Article 6/6 of the Electronic Commerce Law as: any advertisement that aims, directly or indirectly, to promote the sale of products or services through electronic communications. In other words, it is a means of electronic

communication for transmitting data and information about a product or service with the aim of persuading consumers and users to purchase the goods (Mezgish and Natouri, 2020, p. 641).

Therefore, we can define electronic advertising as the promotion of goods or services via cyberspace using social networks, artificial intelligence, and other modern technological media.

2.1 The concept of artificial intelligence

1.2.1 Definition of artificial intelligence (AI) in conventional terms:

Artificial Intelligence (AI) is composed of two words: intelligence and artificial, where intelligence is defined as the ability to learn, adapt, be flexible, respond to situations and problems, and think constructively toward a goal. Meanwhile, the word artificial or industrial is related to the act of making things as a result of human activity or action (Abu al-Nasr, 2020, p. 131).

2.2.1 Definition of artificial intelligence from a procedural perspective:

It is a special system capable of processing a huge amount of information and data accurately to discover patterns and trends for decision-making.

3.1 The concept of social influencers

1.3.1 Definition of social influencers in terms of terminology

Social influencers are defined as individuals who have credibility with large numbers of social media followers, possess knowledge and expertise in specific topics, and share details of their personal lives and experiences with their followers through posts such as photos and videos. They are often experts in content creation and therefore have a significant influence on their followers and their purchasing decisions (Khanifer, 2023, p. 507).

Based on the above, we can define social influencers as people who have the ability to influence the opinions and behaviors of their audience through social networks. They have a large number of followers and interactors, and they use them to influence their decisions, whether in marketing or other issues.

4.1 Concept of consumer behavior:

1.4.1 Definition of consumer behavior in conventional terms:

It is a type of human behavior that we all engage in, regardless of the means and methods used. It involves the process of purchasing products and services that people deem suitable for satisfying their needs and desires, and they decide to purchase specific quantities of them at specific times (Al-Awadli, 2016, p. 22).

Therefore, we can define it procedurally as the action taken by the consumer or customer when they decide to purchase a product, as this behavior is a reflection of their feelings and thoughts at that moment. It refers to every step they take, from the moment they consider purchasing a product to the moment they actually purchase it.

5.1 Concept of the digital environment:

Given the difficulty of defining this term, which is mainly due to the difficulty of dealing with it, some scholars have attempted to define the digital environment. Ahmed Hussein Bakr al-Masri defined it as: one in which data is processed in digital form through new communication channels that allow direct and complete access to data, whether commercial or service-related. The digital environment has created a new workspace that differs from the traditional environment, giving rise to the digital work environment (Lwaer, 2023, p. 15).

Therefore, we can define the digital environment procedurally as the virtual space that is formed through the use of modern electronic media.

2. Characteristics of electronic advertising

Electronic advertising has unique characteristics compared to traditional advertising, which can be summarized as follows (Farhati and Batsi, 2023, p. 100):

- Electronic advertising is similar to a small billboard that takes a specific form and appears at the top or bottom of the screen, which is called a “banner” and includes graphics, images, or both.
- Establishing a lasting and continuous relationship with customers and delivering the advertising message to a wide audience of millions of people.
- No high printing and production costs, and therefore lower electronic advertising costs.
- Providing the use of multiple technical and artistic means that attract the attention of the recipient.
- The speed of delivering advertising messages and the flexibility of their circulation by a wide base of Internet users.
- The speed of knowing the results of the advertising campaign through the ability to control and know the number of visitors to the site through the advertiser's control panel.
- The ability to customize or direct the media message to a specific segment of viewers with the ability to interact with them regarding the advertised product or service.
- The ability to specify the appearance of the advertisement at certain times of the day or days of the week.
- The ability to increase and control the advertising time according to the advertiser's wishes.

- Establishing the name of your product or organization among a wide base of visitors and users around the world.

3. The impact of electronic advertising via new media sites

The Internet is considered the cornerstone of advertising communication. It represents a vast global network capable of connecting millions of computers to transmit data and information. It is a virtual space through which users can access and exchange various types of data. On the other hand, virtual electronic advertising via the Internet is one of the most important types of mass communication that seeks to achieve a set of objectives. Unlike traditional advertising, it focuses primarily on the response or feedback of the person receiving or exposed to the content through virtual space, relying on mass or personal communication methods (Malouki, 2015, p. 325).

It can be said that new media sites, particularly social networking sites, have become an alternative virtual environment that allows for the expansion of the actual and potential audience for advertising. Advertisers on social networks take into account many technical and technological aspects related to the future in order to motivate them to purchase the product or change their behavior towards other materials, taking into account the nature of the passive audience. The message creator takes into account a set of methods in an attempt to subjugate the recipients and contain those exposed, the most important of which are (Maloki, 2015, p. 326):

- The first method: This method relies on marginalizing the echo from the receiver by giving it a small amount of time for comments and, in some cases, obscuring its message, in addition to highlighting agreeing opinions to a large extent compared to contradictory ones.
- The second method: This method relies on stabilizing the opinions of the future audience, especially those who are neutral. The creators of the advertising message or media institution open a series of channels for dialogue and

discussion with people who are not convinced by the product or message, and try to discourage their behavior and guide them away from material that could negatively affect the nature of the product or message.

- The third method: This method relies on improving the quality of advertising messages or flashes in virtual space in terms of output, whether in terms of technical aspects or through software applications, which may add an aesthetic dimension with symbolic dimensions that provide the recipient with a communicative context and a semantic field that puts them in a comfortable psychological state that may shape a positive impression of the content of the advertising message.

4. The impact of artificial intelligence algorithms on changing advertising features

Algorithms have become ubiquitous in many fields and applications, from financial institutions to social media sites such as Facebook and Instagram. However, some of these algorithms are more dominant and prevalent than others. There are a number of algorithms that have become widespread in our digital world, namely Google's page ranking algorithm, Facebook's wall ranking algorithm, and the advertising algorithm, the latter of which is actually at the heart of our discussion.

In advertising algorithms, many websites such as Facebook and Google track our online behavior and movements, including the words and ideas we search for and the links we click on, in order to show us advertisements and ads that are precisely targeted to our preferences and areas of interest. Sophisticated algorithms analyze vast amounts of data to extract meaningful words that help determine which ads and promotions to show. These algorithms also work in tandem with purchase recommendation algorithms, whereby online retailers such as Amazon and Netflix make suggestions for items that visitors might want to buy, based on what they have searched for or previously purchased. Amazon and Netflix, make suggestions for

items that visitors can purchase, based on what they have searched for or previously purchased. The ability and accuracy of these algorithms evolve over time, as they automatically adapt to changing consumer tastes and needs. These algorithms are in fact linked to the different levels of connectivity provided by the Internet.

We also note that there are algorithms for arranging the wall on Facebook, so that Facebook presents a set of carefully selected advertisements, articles, and posts on the user's wall. What to present is determined by a complex algorithm that takes into account many factors related to the user's activity on Facebook, such as the number of comments, the identity of the publisher, and the type of post. Facebook uses programming algorithms built using artificial intelligence, which can perform operations that would have been impossible for the human mind to believe ten years ago. For example, it can: identify the user's interests through their interactions with posts and images and their following of certain products, all in order to use this information to display advertisements that correspond to their needs and interests (Bourhala, 2022, pp. 24-25).

5. The impact of electronic advertising on consumers through social influencers on social media sites

With the emergence of social networks, standards and metrics have changed, both for the media and communications and for institutions involved in public relations, advertising, and marketing. The phenomenon of social influencers has spread across social media. An influencer is someone who, through their actions, behavior, and ideas, can influence others through their blogs and social media accounts. Examples of such influencers include celebrities in the fields of art, sports, politics, media, and others.

It can be said that the mechanism of using celebrities and influencers to promote goods, services, and ideas is not new, but the new use and employment of celebrities to support and build the mental image of the brand, support repurchase behavior, and obtain a high degree of brand loyalty is what we can consider a new marketing strategy.

Social influencers derive their influence from indicators (Nafea, 2019, pp. 155-156):

- The rate of social dissemination via social media sites.
- Their content and its value to other users.
- The trust others place in them and their credibility with consumers.

Electronic advertising using social media influencers is a form of creating a position for a product or brand by placing it within a specific media context. Brands gain their image from influencers on social media sites because of their effectiveness in achieving the following:

- Encourage consumers to participate in online conversations about brands by opening up discussions between customers and consumers (Buying Conversations)
- Increase recipient awareness of the brand and support the relationship between the brand and its audience by improving the brand's image and reputation, which is achieved through the popularity and credibility of the social influencer and their ability as an opinion leader to influence the trends of their viewers and followers.
- Access to the target audience, as followers of a particular influencer are usually interested in the product being marketed, making it a good way to target the audience.
- Given consumers' skepticism about corporate advertising, the use of influencers helps overcome the problem of source bias, as consumers view the influencer's recommendation of a product as an objective recommendation that seeks to serve the consumer without profit motives.
- Advertising with influencers boosts online searches for the brand on search engines, as searches for influencers are usually linked to the brands they recommend (Mariam, Nisreen, and Karima, The Contribution of Social Media Influencers in

Guiding the Purchasing Decisions of Their Followers - An Analytical Study of a Sample of Posts from the Instagram Page of Influencer “Noor Al-Huda Bouhalsa,” 2022, p. 52).

6. Qualitative analysis of influential advertisements by “Amira Raya” on her Instagram page:



1.6 Profile of social influencer “Amira Raya”

Amira Ria is a social media content creator in the field of lifestyle. . She is of Algerian origin, married, and the mother of one child. She entered this field in 2016 and owns her own brand specializing in clothing for women who wear the hijab, called “Amira Ria Collection.” She has made a name for herself by offering advice on everything related to how to wear the hijab, cosmetics, and clothing coordination.

She also documents her travels to various cities through vlogs on her YouTube channel. She has also recently become a presenter for

television programs on private satellite channels, such as the program Souq Al-Nisaa (Women's Market), and currently has 7.1 million followers on Instagram, 983 followers on Facebook, and 1.49 million followers on her YouTube channel.

2.6 First image: Advertising brochure for the Tunisian Tourism and Travel Agency:



Description: This post features a photo of “Princess Raya” on her Instagram page with her son, each carrying their own suitcase on a trip. The photo was taken in front of the entrance to the “Yasmine” hotel in the Tunisian city of Hammamet, as indicated at the top of the photo (the location marked in red). (Yasmine Hammamet)

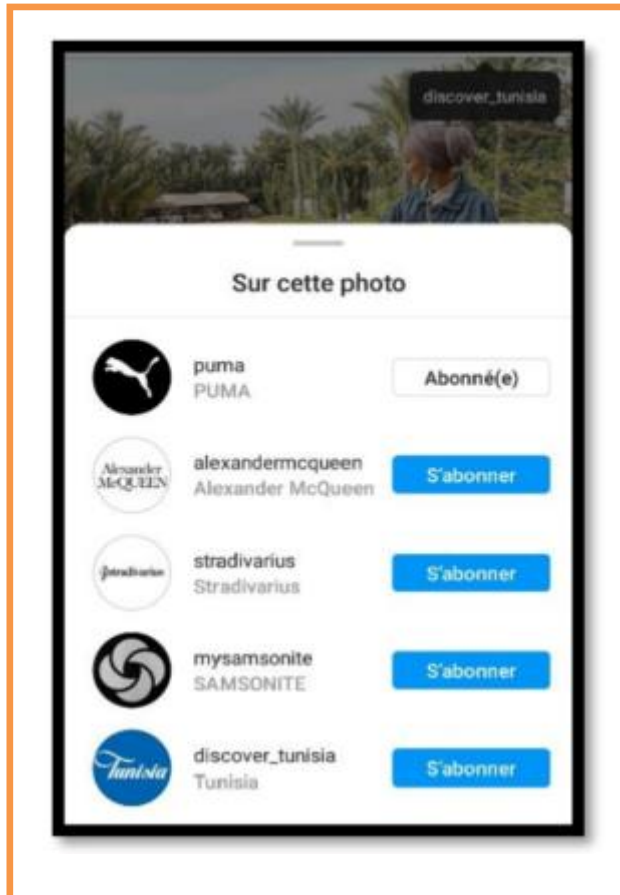
In the comments section, the owner of the photo describes it as:
Travelling With My Everything Let – @discover-tunisia together.



In other words, traveling with everything for me, let's discover Tunisia together (mentioning the Discover Tunisia travel agency account). Influencer Amira Ria also added the hashtag feature to her profile, as shown in the picture:

tunisia @ motherson @ mothersonlove @ travelblogger , In order to increase interaction between different social media sites and expand the reach of the post, when you click on the red arrow in the image above, a list appears with the words “sue cette photo” (like this photo) and the following accounts:

@puma: This is an account dedicated to the brand of shoes worn by the influencer's son. This brand is global and has branches in the country specializing in high-quality sportswear and shoes.



@alexandermcqueen: This refers to the brand of shoes worn by the influencer, which is an international brand specializing exclusively in women's clothing and shoes.

@stradivarius: This is an account for the brand of the jacket worn by the influencer in the photo above, which is also a global brand for women's clothing and shoes.

@mysamsonite : This is the account for the brand of red travel bags in the photo, which is an international brand that designs and manufactures all types of bags.

@discover – tunisia: This is the account of a Tunisian travel agency.

Analysis:

Through the influencer's posts on her Instagram pages, we can see that the Tunisian Tourism and Travel Agency @

discover – tunisia invited influencer “Amira Raya” to a paid vacation at its most luxurious hotels in Hammamet, Tunisia, in order for her to promote the country online through her social media pages and YouTube channel, given her popularity in Algeria. The aim was to promote tourism services in Tunisia and spread a positive image of the hotels' services, targeting Algerian tourists as the recipients of this tourism content. We also note that the influencer used the product placement feature to promote the brands she purchased from using product placement (placement de produits). In addition, she used the hashtag () feature to ensure wide dissemination of her posts and increase interaction and views. She also worked on promoting the hotel electronically by mentioning its location at the top of the image using the location feature “la localisation” .

3.6 Second image: An advertisement for cosmetics:



Description: It is clear from the photo posted by influencer “Amira Raya” on her Instagram page sitting in front of a table displaying products from the brand Piové, which specializes in cosmetics, along with a notebook and pen bearing the same brand logo. She also mentions her location (la localisation) as Algeria .

As we can see in the comments section, the owner of the impressive photo, Amira Raya, comments on the product as follows:

- Hier j’ai utilisé le @ pioecometics fondation weritlkom f la story :
- full coverage fondation – c vrai yo93d 12 h-
- pour le prix 1000 Da disponible dans les boutique flormar .
- can we talk about the nail polish (150)

Through these phrases, which are a mix of French and colloquial language, the influencer described her experience with the cosmetics she obtained from the brand (piove) and gave her opinion on this product, emphasizing the authenticity of the features and characteristics presented by the brand, as well as the prices and locations where it can be found.

Analysis: Through this promotional post on Instagram, it is clear that the influencer has entered into a paid partnership with the cosmetics brand Pioecometics, as she indicated by writing “Partenariat remunere avec piovecosmtics” in red at the top of the post. She also used the “la buuzzkti” technique, which is a marketing strategy that aims to generate buzz and excitement around a product by creating an engaging interactive experience for target consumers. It relies heavily on the influence of electronic word of mouth, which is what the influencer did by showing a package of products for the same brand, gifts, and additional content, such as what appears in the picture, a booklet or notebook accompanied by a pen related to the brand's symbolism. This is a type of electronic advertising for the product, where when you purchase this product, the brand offers you gifts that contribute to promoting the company or creating a positive image in

the commercial environment. These are the most prominent goals of influencer marketing based on personal experiences.

7. The impact of electronic advertising on consumer behavior in the digital environment:

Electronic advertisements leave a special impression on the recipient (the consumer) due to the industrial and artistic work on words and images. The linguistic structure reflects a certain mental organization in the mind, while the images convey a series of symbolic and interpretive meanings, which are received by the recipient as a single identity and serve their persuasive purpose. Both are sources of pleasure, as all the mechanisms mentioned above are based on the element of excitement. The more intense the stimuli used, the more the recipient will be attracted to the product. There are two types of stimuli: innate stimuli inherent in the mind as a biological element that calls for satisfaction, and acquired stimuli, which are the result of social learning.

Consumer behavior can be divided into:

1- Future audience behavior: This is the audience that receives this message without reacting for one of the following reasons:

- They do not need this product and are not interested in its features.
- Not having a membership card.
- He may like the product: he is influenced by advertising but does not have the purchasing power, and that is the dividing line between the poor and the rich.
- The message may not be conveyed, either because the marketer has failed to identify the audience, or because the advertising concept is flawed, and thus the advertisement gets a bad reputation.

2- The behavior of the consumer audience: It is the audience that receives the message and interacts with it, either through purchasing or commercial participation. It is linked in its first follower to a physiological necessity, to a feeling of deficiency, to the desire for satisfaction, to need, to experience. In order to control and direct the consumer's purchasing behavior, the largest number of information related to his current situation must be collected: what is related to his conscience, his material situation (purchasing power), and his taste tendencies As well as his religious beliefs (Ben Sharik, 2023, pp. 152-153).

Conclusion :

In conclusion, we can say that in light of the technological changes that human society is going through and in parallel with the digital revolution that has affected almost all daily practices of the individual, electronic advertising supported by artificial intelligence and social influencers has become one of the basic pillars in this digital world, as it affects the formation of consumer behavior in the digital environment, as artificial intelligence allows the ability to customize advertisements and direct them accurately to the target audience, each according to his desires It provides better personalized recommendations based on accurate analyses of consumer behavior, thanks to information technology, which increases their effectiveness and influence on purchasing decisions. In addition, public and private institutions concerned with public relations and marketing focus on using influential people who are popular in the public to increase awareness about brands, which is an alternative method in direct marketing to the target consumer Most companies today, whether small or large, invest in social influencers of all fields to publish their products or services through social networking sites, especially Instagram sites, as they enjoy a wide fan base and have a strong influence in shaping people's opinions and directing their behavior.

This interaction between advanced technology and social media is reshaping the features of the market and greatly affecting

consumption patterns, which requires companies to understand these new strategies and dynamics and invest them intelligently to achieve success in the digital market.

Recommendations:

- Artificial intelligence applications must be integrated with modern machines and technology to bring about a qualitative shift in the field of electronic advertising by providing the feature of intelligent search, whether by sound or image.
- Care must be taken to ensure that the content of the electronic advertisement matches the product or service provided in reality, because there are many ways through which the consumer can learn the truth about this product before purchasing it by benefiting from the experiences and opinions of other customers thanks to the presence of the comments feature on social networking sites.
- The need to enhance transparency between brands and social influencers by disclosing the commercial relationship, to increase consumer awareness of the content and quality of advertising and its compliance with laws and legislative regulations.
- The necessity of establishing laws and regulations for social networks, especially websites through which electronic advertising takes place, in order to demonstrate the activity of social influencers and content creators in the field of marketing, and to increase focus on the requirements of transparency and integrity, especially with regard to advertisements and commercial partnerships, to clarify whether the content is fake or real.
- The necessity of enhancing academic research by organizing forums and workshops aimed at clarifying the developments taking place regarding electronic advertising in light of the spread of artificial intelligence and social influencers, to

clarify and evaluate their impact on the consumer in the virtual environment, and to clarify their work in social networks so that the consumer does not fall into misinformation and deception.

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