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The Role of Artificial Intelligence in Enhancing Digital Marketing for Organizations: A Survey of a Sample of Employees at Asiacell in Iraq

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Article Info.	Abstract
	In light of rapid technological advancements in general, and their application in the fields of work and marketing in particular, this study presents a conceptual framework for two main variables: the independent variable, artificial intelligence (AI), represented by its dimensions (content recommendations, expert systems, and machine learning), and the dependent variable, enterprise digital marketing, represented by its dimensions (attraction, communication, and engagement). Given the novelty of AI and the need for its application in organizations whose operations rely heavily on digital technology, Asiacell Telecommunications Company in Iraq was selected as the case study. A questionnaire was used as the data collection tool through a survey (limited by company policy) involving 33 participants. The data were analyzed using SPSS version 18, employing statistical methods such as the mean and standard deviation. This study aimed to determine the nature of the relationship between AI and digital marketing, and to assess the extent to which AI contributes to enhancing enterprise digital marketing. To achieve its objectives, the researcher designed a hypothetical model illustrating the relationship between the variables. To explore this relationship, several hypotheses were put forward: First, there is a statistically significant correlation between artificial intelligence and e-marketing; and second, there is a statistically significant effect of artificial intelligence on e-marketing.

1. Introduction

In light of the rapid developments and changes in the work environment of modern organizations, the intensifying competition in marketing, and the advancements in technology and new techniques, organizations have begun searching for ways to adapt, grow, and respond quickly to this changing environment, aiming to achieve outstanding performance in promotion, advertising, and marketing in general. Therefore, the use of artificial intelligence (AI) in marketing has led to a wave of development in data-driven organizations that are sweeping the digital world [1]. AI enables marketers to create modern and innovative personalized experiences that meet consumer desires at a significantly lower cost compared to traditional campaigns that can cost thousands of dollars [2]. By using smart marketing that relies on data, analytics, and a deep understanding of user behavior and interests, marketing operations become more effective, improving results, providing a superior user experience, stimulating continuous innovation and development, and enhancing customer targeting. Despite the numerous benefits of AI, its applications face several challenges, including privacy, security, data reliability and accuracy, and the increasing reliance on technology [3]. In our current digital age, AI applications have become a central pillar in the world of digital marketing. This revolutionary technology is one of the most influential fields in achieving success in e-marketing, and it constitutes crucial aspects of the present and future of digital marketing strategies [4].

The use of artificial intelligence in marketing has led to a new wave of development in data-driven organizations, which are sweeping the digital world [5]. This underscores the importance of artificial intelligence in the modern era and in light of accelerating globalization,

through the use of interactive advertising and content experiences. This increases customer attraction and encourages them to purchase and interact with the companies' websites, as well as establishing the necessary infrastructure for modern devices and smart, modern communication systems for the organization.

2. Research Methodology
2.1: The Research Problem
The current research problem was crystallized through observations via questionnaires and interaction with employees or workers in the Iraqi telecommunications company Asia Cell. We note that as a result of the increasing interaction with artificial intelligence programs, technologies, and algorithms with which employees interact, a number of problems arise in aspects of the electronic marketing performance of these organizations or companies. This often negatively affects the employees' ability to achieve and interact positively, which weakens or reduces the promotion of work and slows it down, especially in the levels of promoting electronic marketing. Therefore, from this idea, the research study was launched to reveal the active and positive role of artificial intelligence and its impact on promoting electronic marketing in the organizations of the research community. Thus, the problem of the study was diagnosed by asking about the research title (The role of artificial intelligence in promoting electronic marketing for the work of organizations).

2.2: The Importance of the Study
The scientific and practical importance of the role of artificial intelligence in e-marketing constitutes a major focus of paramount importance in academic and professional circles, given the rapid transformations witnessed in this field. The interconnection between smart technologies and modern marketing strategies opens new horizons for innovation, as well as in the practical aspect, where it has become clear that research into these issues is urgent and necessary to understand how to improve marketing performance and enhance customer experience. This study aims to identify the relationship between artificial intelligence and e-marketing, specifically the role of artificial intelligence in enhancing marketing effectiveness, through studying the technologies used, the challenges they face, and the opportunities they offer in this advanced digital age.

2.3: Research Objectives
1- To identify the correlation between artificial intelligence and e-marketing.

2- To explore the role of artificial intelligence in improving user experience.

3- To explore the role of artificial intelligence in enhancing e-marketing.

2.4: The Hypothetical Research Framework:
Based on management literature addressing the research variables (artificial intelligence and e-marketing), the researcher developed a hypothetical research framework. This framework reflects the nature and type of relationships between the current research variables in a way that supports the research problem, achieves its objectives, and clarifies its hypotheses, as illustrated in Figure 1. This figure represents the logical relationship between the variables in the research title, namely the independent variable (artificial intelligence), with its sub-dimensions (content recommendations, expert systems, and machine learning), and the dependent variable (e-marketing), with its sub-dimensions (attraction, communication, and engagement).
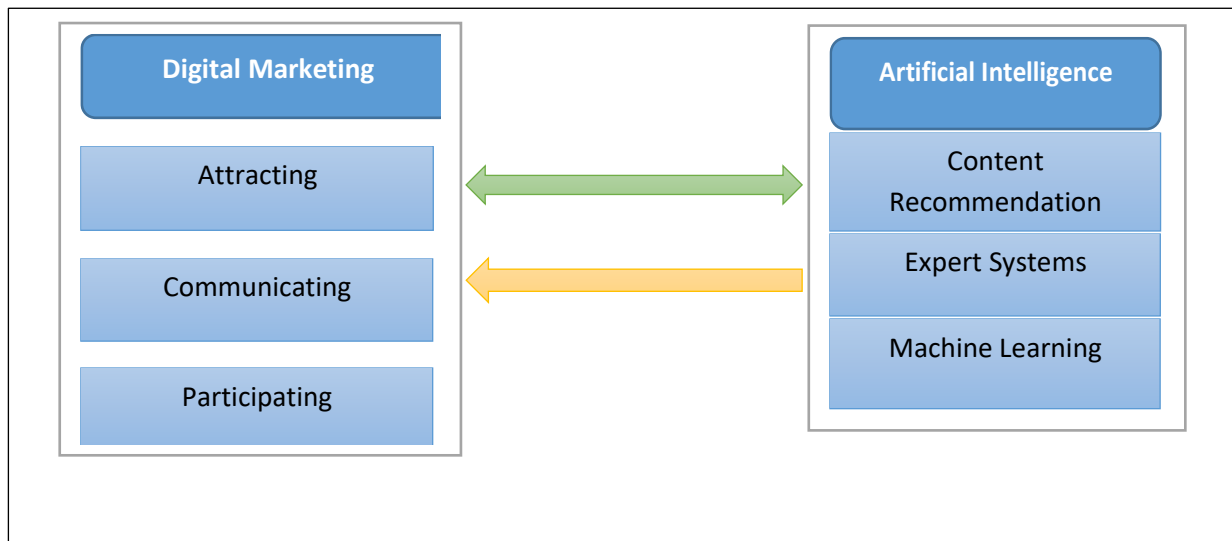

Fig.1 : Represents the hypothetical scheme of the research variables.

2.5: Hypotheses
First Main Hypothesis: There is a statistically significant correlation between artificial intelligence and e-marketing.
Second Main Hypothesis: There is a statistically significant effect between artificial intelligence and e-marketing.

2.6: Research Scope

Spatial Scope: The study was conducted at a specific location belonging to the Asiacell Iraq telecommunications company. These locations contain diverse customer segments and clients, providing a rich environment for data collection. However, it should be noted that the results obtained reflect the specific context of artificial intelligence and e-marketing use within the company in Iraq.

Temporal Scope: The field study for this research was conducted over a specific period, from September 19, 2025, to October 17, 2025. This limited timeframe is considered sufficient to achieve the objectives of this exploratory study, which aims to collect the required data.

Human Scope: The study is limited to employees of Asiacell Iraq.

2.7: Study Population and Sample

1- Research Population: The study population was defined as a significant sector that relies on artificial intelligence in e-marketing processes and meeting customer needs. The Iraqi telecommunications sector comprises ten companies (Asiacell, Etisalatna, Iraqi Post, Zain Iraq, Iraqi Telecommunications and Postal Company, Masarat Telecommunications Company, Iraq Telecom, Iraqna, Korek Telecom, and Amnia Al-Kafeel). Asiacell was chosen as the study population based on the company's requirements and nature, as well as its cooperation with the researcher.

2- Research Sample: The research sample consisted of department heads and male and female employees at various administrative levels within the company.

2.8: Data and Information Collection Methods

   In order for the success of this study and to achieve its goals and gains, the researcher relied on the following tools in the process of collecting theoretical and field data and information, classified into the theoretical side, in which a group of Arabic and foreign books and publications, journals, periodicals, scientific research, university theses and dissertations related to the subject of the current study were relied upon, in addition to using the World Wide Web, and the practical side, through which the researcher relied on a number of tools and means necessary to cover the practical side of the study, most notably the questionnaire form, as the study tool, the questionnaire form, consisted of two main axes, as its first axis included general information pertaining to the study population (gender, age, educational attainment, years of service), while its second axis consisted of two parts: artificial intelligence and electronic marketing.

3. The Concept of Artificial Intelligence:

Artificial intelligence consists of two words: "intelligence" and "artificiality." Intelligence refers to the ability to understand new circumstances and/or situations [6]. The keys to intelligence are perception, that is, the ability to understand and learn. The word "artificiality" is related to the verb "to create" or "to fabricate," and it refers to all things that arise as a result of activity or action through which things are created and shaped, distinguishing them from things that already exist and are generated naturally without human intervention [7]. Artificial intelligence is explained as the ability of a machine to mimic the human mind and its workings, such as its ability to think and explore [8]. With the tremendous advancements in computers, it has become clear that they can perform tasks more complex than we imagined, such as exploring and proving complex mathematical theories. They are characterized by their speed in completing tasks with high accuracy and by their large storage capacity. However, to date, no program can match the flexibility of the human mind, especially with regard to deductive and analytical tasks.

   On the other hand, artificial intelligence (AI) is a thriving technology integrated into numerous smart applications across various fields. It is ubiquitous, and its use in problem-solving across diverse sectors is steadily increasing [9]. Examples include autonomous vehicles and drones in the automotive industry, medical diagnostics and telemedicine in healthcare, malware detection systems in cybersecurity, image processing in computer vision technologies, and interactive advertising.

   Therefore, it can be said that AI can analyze massive amounts of data at extremely high speeds to extract valuable insights into customer behavior and preferences [10]. This allows for the design of more personalized and effective marketing campaigns, as it can identify consumer behavior patterns and use this information to tailor offers and content individually. Furthermore, the automation of advertising campaigns and customer service responses, including the use of chatbots, can save companies time and resources while maintaining service quality [11].

3.1 the importance of artificial intelligence:

   It is expected to significantly impact a wide range of fields, making it of paramount importance across various sectors. The main prospects for artificial intelligence in the coming decade are as follows [12] :

1- Continued technological advancement: Advances in hardware and software will continue to enable the development and improvement of AI algorithms. High-performance computing and specialized AI architectures will become essential.

2- Expanded automation: AI will continue to automate an increasing number of tasks and processes in areas such as manufacturing, logistics, financial services, healthcare, and more.

3- Data management: Data is essential to AI; consequently, data management and protection will remain a priority.

4- Education: AI will transform teaching and learning methods, providing personalized and widespread access to education.

5. Economy: Artificial intelligence will contribute significantly to economic growth, increasing productivity and innovation in companies.

6-This will bring economic growth and efficiency to many sectors.

7- Healthcare: Artificial intelligence will be used in a variety of medical applications, from telemedicine to personalized diagnosis and treatment.

3.2: Characteristics of artificial intelligence:

 Artificial intelligence has many characteristics and advantages, which are derived from taking advantage of past experiences and applying them to new situations; responding quickly to new conditions and situations; dealing with difficult and complex cases, as well as dealing with ambiguous situations in the absence of information; distinguishing the relative importance of elements within known situations; visualizing, creating and understanding visual information; and providing information to support decision-making [13].

3.3 Dimensions of Artificial Intelligence:

1- Content Recommendation

Artificial intelligence has become an integral part of the marketing industry, especially in the field of content recommendation. By leveraging data analytics and machine learning algorithms, AI systems can suggest personalized content to consumers, enhancing their browsing and viewing experiences.

AI algorithms can analyze extensive datasets about each user's characteristics and behaviors to identify detailed patterns and preferences. This enables platforms to recommend content that aligns with the specific tastes and needs of individuals from vast catalogs. According to a McKinsey survey, 63 percent of consumers are more likely to purchase from brands that offer personalized offers and suggestions. AI recommendation engines improve the relevance of each suggestion by matching it with predictive user models. Studies show that AI-powered personalization can increase click-through rates by more than 200 percent and conversion rates by more than 250 percent. Thus, consumers benefit from seamless discovery of engaging content, while marketers achieve a higher return on investment [14].

2- Expert Systems

Expert systems are among the most widely used and successful applications of artificial intelligence. They are now used in all fields, including medicine, engineering, and administrative sciences. These systems are designed as computer programs that provide solutions to problems within a specific field and suggest the appropriate decision to the expert. Expert systems are defined as technologies that discover solutions to problems requiring specialized knowledge and skills. The system operates by mimicking the expert's thinking, skills, and motivations. They include computer programs that simulate the thinking process of an expert in a specific field. An expert system program can be developed to solve a problem involving choosing from a set of options. The decision depends on logical steps, and therefore, any field possesses the expertise of an individual or group that others need [15].

3-Machine Learning

Machine learning is a set of programming techniques that allows machines to adapt their behavior to the surrounding environment with minimal or no human intervention. It helps marketers accelerate the analysis of large datasets, identify changes in consumer behavior, and predict responses to messages. This enables marketing teams to gain a deep understanding of their customers and make accurate predictions about their behavior.

Furthermore, it allows computers to learn, making applications more accurate in predicting outcomes without explicit programming or constant supervision. From the above, it is clear that machine learning is a branch of artificial intelligence that improves computer learning based on experience without explicit programming. It achieves this by building machine learning models to perform tasks faster and enable various processes to be automated [16].

4. The Concept of E-Marketing:

Marketing is considered the most dynamic function compared to other organizational functions. Classical marketing has adapted and kept pace with technological development, evolving through several stages until it reached what is known as online marketing or e-marketing, which has numerous and varied definitions.

It is defined as the optimal use of digital technologies, including information and communication technologies, to enhance marketing productivity and its processes. These processes encompass organizational functions, operations, and activities aimed at identifying the needs of target markets and providing goods and services to customers and stakeholders within the organization [17].

4.1 The objective of e-marketing:

E-marketing aims to achieve a set of objectives, the most important of which can be summarized as follows [17]:

1- Reducing product costs by eliminating the need for advertising in traditional audio-visual and media outlets.
2- Easier access to consumers anywhere in the world, in addition to increased purchasing power.
3- Eliminating unnecessary costs and expenses associated with establishing traditional stores and facilitating access to necessary information and comparison between competing products.
4- Benefiting from the experiences of previous organizations operating within this system.
5- Simplifying distribution and promotional activities.

4.2 Reasons for Using E-Marketing:

This marketing method has spread for several reasons [17], It has helped bridge geographical distances and overcome obstacles between different regions of the world without the need for direct meetings between the parties involved in the marketing process. It establishes direct contractual relationships between the seller and the buyer without the need for an intermediary. Furthermore, it significantly reduces marketing costs compared to traditional methods between the parties involved in the marketing process. It also allows both parties access to a vast amount of information related to the subject under discussion, enabling them to contract according to the latest market prices and conditions. In addition, it provides access to diverse global markets through a faster, cheaper, and less risky means of communication, potentially leading to marketing opportunities not originally included in their prepared marketing plans. Finally, it allows for communication with others around the clock, seven days a week, and across the globe, helping to overcome time zone differences and keeping marketing channels open to everyone.

4.3 Models of E-Marketing:

Some marketing experts believe that e-marketing practiced by organizations can be classified into three main models or types [18]:

A. External Marketing: This is linked to traditional marketing functions such as designing and implementing the marketing mix (product, price, distribution, promotion).

B. Internal Marketing: This is linked to employees within the organization. The organization must follow effective policies to train and motivate employees to communicate effectively with customers and support them to work as a team striving to satisfy customer needs

and desires. Every individual in the organization should be customer-oriented in their work. It is not enough to have a department in an organization that performs traditional marketing tasks while the rest of the individuals or departments work in other directions.

C. Interactive Marketing: This is linked to the idea of the quality of services and goods offered to customers and depends primarily and intensively on quality and the relationship between the seller and the buyer.

4.4 Dimensions of E-Marketing:

1- Attraction: this dimension encompasses how to attract and draw customers to the organization's website. This is achieved by introducing the organization's brand through placing its name or mentioning it in a URL or specific website address. This helps remind customers of the organization's name and allows them to easily find its brand, as these sites are familiar to them and are crucial in attracting them to the organization's website. Digital marketing has changed the way customers are attracted by using content, organic search, and lead generation to attract those interested in products and services. Instead of forcing people to buy products or services, you attract them by offering added value, solving problems, and building genuine relationships. The goal is to generate interest and interaction, which motivates your customers to contact you [19].

2- Communication: communication one of the most important opportunities for creating value in digital marketing. It represents an opportunity to connect the service provided with the marketing time and effort of multiple customers simultaneously. Social media allows marketers to learn more about individual customers through continuous interaction, providing individual services, and reporting on available services or new offers. Social media provides an effective platform for building and enhancing brand awareness. Through the electronic communication dimension, which interacts with artificial intelligence tools, companies can showcase their personality and values through diverse content, including images, videos, and stories, enabling immediate engagement with their audience [20].

3- Engagement: After attracting customers and communicating with them through various social media platforms to the organization's website, it's essential to involve them in the marketing process and understand their opinions. This involves communicating with them, learning their perspectives and preferences, and fostering interaction that contributes to closing the business. This process includes a variety of activities such as: (Kashkool et al., 2022:1895) (Interaction) Liking, commenting, sharing, retweeting, and other forms of interaction with published content and (Content Creation) Writing reviews, posting photos and videos, creating blogs, and other forms of creating brand-related content in addition to (Participating in Online Communities) Joining forums and social media groups and participating in discussions and (Providing Ratings and Feedback) Providing ratings and comments on products and services, and providing feedback to the brand [21].

The researcher believes that through a comprehensive review of the above topics, the impact of artificial intelligence on electronic marketing becomes clear, and that the overlap between these two fields can lead to significant improvements in how companies interact with customers and achieve business goals in the information age.

5. The Practical Aspect:

The research population in this study is "Asiacell-Iraq," one of the leading companies in the region, making it a key focus for studying "The Role of Artificial Intelligence in Enhancing E-Marketing for Organizations." The research sample was carefully selected to ensure representativeness of the study population. The sample consists of "employees and workers at Asiacell Telecommunications Company - Iraq." This sample was chosen due to its key role in shaping and implementing administrative policies and procedures.

5.1 The Research Population and Sample

This section examines the demographic characteristics of the research sample and analyzes their opinions on the two study variables. Thirty-three questionnaires were distributed, and the sample included Asiacell employees in Iraq, represented by department heads and employees at various administrative levels. Sample Description According to Demographic Factors.

Table1: Shows the percentage of male and female participation in the studied sample**.**

Gender		
ratio%	number	
63.6	21	Male
36.4	12	Female
100	33	Total

Table 1 shows that the sample used in the research consisted of 33 responses, of which 21 were males (63.6%) and 12 were females (36.4%).

Table 2: shows the numbers and percentages of educational qualifications in the studied sample.

Number of years of service		
ratio%	number	
9.1	3	Preparatory
15.2	5	Diploma
60.6	20	Bachelor's Degree
15.2	5	Postgraduate Studies
100	33	Total

Table 2 shows that the educational qualifications of the research sample were as follows: 3 individuals (9.1%) held a preparatory certificate; 5 individuals (15.2%) held a diploma; 20 individuals (60.6%) held a bachelor's degree; and 5 individuals (15.2%) held a postgraduate degree.

5.2 Statistical Description of the Research Variables

Table 3 :Shows the number of responses according to the Likert scale, along with the means and standard deviations for the studied sample.

Coefficient of variation c.v.	standard deviation	average	I completely agree	I agree	neutral	I disagree	I strongly disagree	Question
14.97	0.666	4.45	18	12	3	0	0	1
15.89	0.712	4.48	20	9	4	0	0	2
14.64	0.666	4.55	21	9	3	0	0	3
11.83	0.549	4.64	22	10	1	0	0	4
7.7023	0.34944	4.5368	Content recommendation x1					
27.65	0.929	3.36	4	10	13	6	0	5
15.75	0.712	4.52	21	8	4	0	0	6
19.70	0.859	4.36	19	8	5	1	0	7
19.16	0.795	4.15	13	12	8	0	0	8
14.0239	0.58167	4.1477	Expert systems x2					
15.91	0.684	4.30	14	15	4	0	0	9
14.64	0.666	4.55	21	9	3	0	0	10
9.65	0.465	4.82	28	4	1	0	0	11
14.97	0.666	4.45	18	12	3	0	0	12
14.0239	0.58167	4.1477	Machine learning x3					
15.91	0.684	4.30	14	15	4	0	0	1
14.64	0.666	4.55	21	9	3	0	0	2
9.64	0.464	4.81	28	4	1	0	0	3
14.97	0.666	4.45	18	12	3	0	0	4
7.7023	0.34944	4.5368	Attraction y1					
18.84	0.810	4.30	16	12	4	1	0	5
17.82	0.761	4.27	14	15	3	1	0	6
24.83	1.023	4.12	15	10	6	1	1	7
27.65	0.929	3.36	4	10	13	6	0	8
14.0239	0.58167	4.1477	communication y2					
15.91	0.684	4.30	14	15	4	0	0	9
14.64	0.666	4.55	21	9	3	0	0	10
9.65	0.465	4.82	28	4	1	0	0	11
14.97	0.666	4.45	18	12	3	0	0	12
14.0239	0.58167	4.1477	Participation y3					

Commentary

Based on the results above, the average AI x score was 4.5368, with a standard deviation of 0.34944 and a coefficient of variation of 7.7023. Item 3 in the Machine Learning dimension achieved the highest average score of 4.82, with a standard deviation of 0.465 and a coefficient of variation of 9.65. Item 1 in the Systems dimension achieved the lowest average score of 4.30, with a standard deviation of 0.684 and a coefficient of variation of 15.91.

As for the electronic marketing axis y, the average response for this axis was 4.1477 and the standard deviation was 0.58167 with a coefficient of difference of 14.0239. The third item in the participation dimension obtained the highest average of 4.82 and a standard deviation of 0.465 with a coefficient of difference of 9.65. As for the fourth item in the communication dimension, it obtained the lowest average of 3.36 and a standard deviation of 0.929 with a coefficient of difference of 27.65.

Table 4: Correlation coefficients between research variables

variable name	ǀ artificial intelligence x
Digital Marketing y	0.678**

This does not mean that the value is highly significant with 99% confidence.
The correlation coefficient between artificial intelligence (x) and e-marketing (y) was 0.678, which means there is a strong, highly significant relationship with 99% confidence. Results of the effect (regression analysis):

Table (5): The effect of artificial intelligence (x) on e-marketing (y).

Nature of the relationship	Level of significance P	Calculated F value	Calculated t value	regression coefficientβ	Coefficient of determination R2	Dependent variable
The relationship is emotional.	0.000	23.770	4.875	1.097	0.434	Digital Marketing y

Commentary:

The explanatory coefficient was 0.434, meaning that the AI x-axis influences the digital marketing y-axis by 43.4%. The t-test showed a significant effect, indicating that the model parameters are statistically significant. The calculated F-value was 23.770, with a significance level of 0.000, which is less than 0.05, thus confirming the model's statistical significance.

6. Conclusions and Recommendations

This chapter represents the field summary of the study, represented by the conclusions and recommendations that the researcher inferred from through diagnosing the opinions of the study population, analyzing its results, and testing its hypotheses. It consists of two sections. The first includes the most prominent conclusions that were reached in light of the analysis of its statistical results, and the second section includes the most important recommendations and implementation mechanisms recommended by the researcher, which included artificial intelligence priorities related to the studied telecommunications companies and how to use them in enhancing electronic marketing.

5.1 Conclusions

1- There is an impact between artificial intelligence (AI) and e-marketing, confirming the importance of AI in the modern era and the conditions of rapid globalization. This impact is achieved through the use of interactive advertising and content experiences, which increase customer engagement and encourage them to purchase and interact with the companies studied.
2-There is a statistically significant correlation between AI and e-marketing.
3-There is a statistically significant effect between AI and e-marketing.
4-A clear understanding of the learning dimension through reactive rather than proactive learning is evident. This means that companies wait for customer feedback and opinions to use in designing their websites and improving their services, without taking proactive steps to do so. This was reflected in the highest mean score of 4.82, the standard deviation of 0.465, and the coefficient of variation of 9.65.
5-Realizing the dimension of participation, where companies adopt the involvement of customers in the marketing process and learn about their opinions by communicating with them in order to create interaction that contributes to completing the business process and providing multilingual websites to encourage customers to communicate and participate in completing their marketing operations.

5.2 Recommendations

1- The company's management should enhance its significant efforts to attract customers by increasing its focus on advertising banners and interactive ads displayed on other companies' websites to reach the largest possible customer base.
2- The company should increase the frequency and quality of free additional services offered to customers and hold competitions with tangible and intangible prizes to pique customer interest and encourage them to try the company's services.
3- Telecommunications companies should prioritize digital marketing by leveraging artificial intelligence, given its ability to enhance performance levels and optimize content recommendations.
4- It is essential to understand artificial intelligence technologies and their various applications, particularly in marketing, and to provide the necessary resources and modern tools to develop digital marketing strategies and attract more customers.
5 - Conducting courses and seminars on the importance of artificial intelligence and its role in supporting digital marketing, and working on developing electronic marketing and artificial intelligence applications and platforms worldwide, and creating the infrastructure it needs in terms of modern devices and smart and modern communication systems, compared to developed countries that have begun to move towards satellite communications and satellite internet supported by modern technology and artificial intelligence.

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