



Augmented Reality Applications as a Marketing Tool and Its Impact on Visit Intention: Evidence from Egyptian Hotels

تطبيقات الواقع المعزز كأداة تسويقية وأثرها على نية الزيارة للعملاء: أدلة من الفنادق المصرية

Elham Mahmoud El Solia*

Article Info

Article Language: English

معلومات المقالة

لغة المقالة: الإنجليزية

Vol. 10 No. 1, (2025) pp. 172-184 | <https://doi.org/10.21608/sis.2025.390543.1197>

Abstract

الملخص

The research aims to understand the role of Augmented Reality (AR) applications, especially AR applications, as a marketing tool that contributes to improving customers' intention to book hotels. For this purpose, the research relied first on the theoretical framework to define the basic concepts of the research, secondly, the analytical framework which aims to study and analyze the mechanism of AR applications in the hotel sector. The field study included (402) questionnaires distributed to customers who deal with hotel websites in Egypt, provided that they have used one of the AR applications in the hotel sector. Some of the research results were represented in the the impact of AR with its dimensions (AR applications usefulness, AR applications ease of use, AR applications enjoyment), and to increase tourists visit intentions in the hotels in Egypt. Based on the results, some recommendations were proposed, the most prominent of which were using the designed AR application to exploit the benefits of this AR application in enhancing tourists' behavioral intentions toward the hotels, thus supporting the reservation levels and the marketing practices area in particular.

يهدف البحث إلى فهم دور تطبيقات الواقع المعزز، وخاصة تطبيقاته، كأداة تسويقية تُسهم في تحسين نية العملاء لحجز الفنادق. ولتحقيق هذا الغرض، اعتمد البحث أولاً على الإطار النظري لتحديد المفاهيم الأساسية للبحث، وثانياً على الإطار التحليلي الذي يهدف إلى دراسة وتحليل آلية استخدام تطبيقات الواقع المعزز في قطاع الفنادق. وشملت الدراسة الميدانية (٤٠٢) استبياناً وُزعت على العملاء المتعاملين مع مواقع الفنادق الإلكترونية في مصر، شريطة أن يكونوا قد استخدموا أحد تطبيقات الواقع المعزز في قطاع الفنادق. وتمثلت بعض نتائج البحث في تأثير الواقع المعزز بأبعاده (فائدة تطبيقات الواقع المعزز، سهولة استخدامها، استمتاعها)، وفي زيادة نية زيارة السياح للفنادق في مصر. بناءً على النتائج، طُرحت بعض التوصيات، أبرزها استخدام تطبيق الواقع المعزز المُصمم لاستغلال فوائده في تعزيز النوايا السلوكية للسائحين تجاه الفنادق، مما يدعم مستويات الحجز ومجال ممارسات التسويق تحديداً.

Keywords: Augmented Reality, Digital Marketing, Visit Intention, Egyptian Hotels.

الكلمات الدالة: تطبيقات الواقع المعزز، التسويق الرقمي، نية الزيارة، الفنادق المصرية.

*PhD in Hotel Management, Faculty of Tourism and Hotels, Mansoura University

Introduction

Augmented reality (AR) is a technology designed to enhance or expand the real world with computer-generated virtual information and objects. These digital and virtual objects, such as images, text, videos, 3D models, sound, and animation, are integrated into the real world to enhance reality and the user's experience. In other words, AR brings digital content into the user's current or real environment, unlike virtual reality (VR), which allows users to enter virtual worlds (Educause, 2023). Therefore, AR can integrate visual, auditory, and other sensory information into the user's vision to support or enhance their experience (Jack and Jil, 2023). Wearable devices (such as smart glasses) or mobile devices (such as smartphones and tablets) can be used to experience AR technology (Mostafa, 2024). There is no doubt that augmented reality technology and its applications are constantly thriving, enhancing the competitive advantage of hotels and tourists alike. At first glance, tourists' mobile phone screens become more engaging using overlay techniques (Aziz and Friedman, 2019). In this regard, augmented reality technology positively enhances tourists' visit intentions through its three stages (Gbolahan, 2022): it can increase visitor intention to visit (pre-visit), provide richer information and explanations, and learn and enjoy (on-site), and increase spending and return intention (post-visit), thus improving the overall tourist experience (Amer et al., 2025). In light of this, the study designed and developed an augmented reality application as a marketing tool. Then evaluated its impact on future visitor intentions by applying it to the Egyptian hotel sector.

Research Problem

Although augmented reality technology has many benefits for tourism and hotels, none of the hotels in Egypt have used augmented reality as a marketing tool. Challenges to the use and application of augmented reality in hotels in Egypt include: a lack of awareness and knowledge of augmented reality and its importance to hotels; insufficient financial resources to adopt and implement augmented reality in Egyptian hotels; a lack of coordination among relevant authorities; and technical challenges such as the ineffectiveness of GPS systems, which impacts tracking systems; problems with augmented reality displays that rely on mobile phone and tablet screens; and the lack of free internet access in hotels in Egypt (Thomas and Davenport, 2020; Usher, 2023; Mazari and Bensalem, 2024). Augmented reality is an important tool for guiding tourists' visit intentions (Chen and Tsai, 2017). However, there is insufficient research in hotel studies on why people use augmented reality or how its use affects their travel intentions. Smith and Johnson (2024) as well Almurad et al., (2025) emphasized the scarcity of research on the impact of augmented reality on tourists' intentions toward tourist destinations. Accordingly, the researcher sees a real problem.

Research Objectives

The objectives of this research can be summarized as follows:

1. Evaluate the reality of augmented reality applications in hotels.
2. Develop an augmented reality application for hotels as a proposed solution to address some of the problems (revealed by the pilot study) and as a marketing initiative to support tourists' behavioral intentions toward hotels.
3. Measure the benefits of augmented reality applications by developing a proposed framework to study the impact of its use on tourists' behavioral intentions toward hotels.
4. Identify the obstacles to the implementation of augmented reality in hotels.
5. Provide recommendations based on the research findings to help managers and decision-makers in the Egyptian hotel sector adopt the use of augmented reality technology to enhance tourists' behavioral intentions.

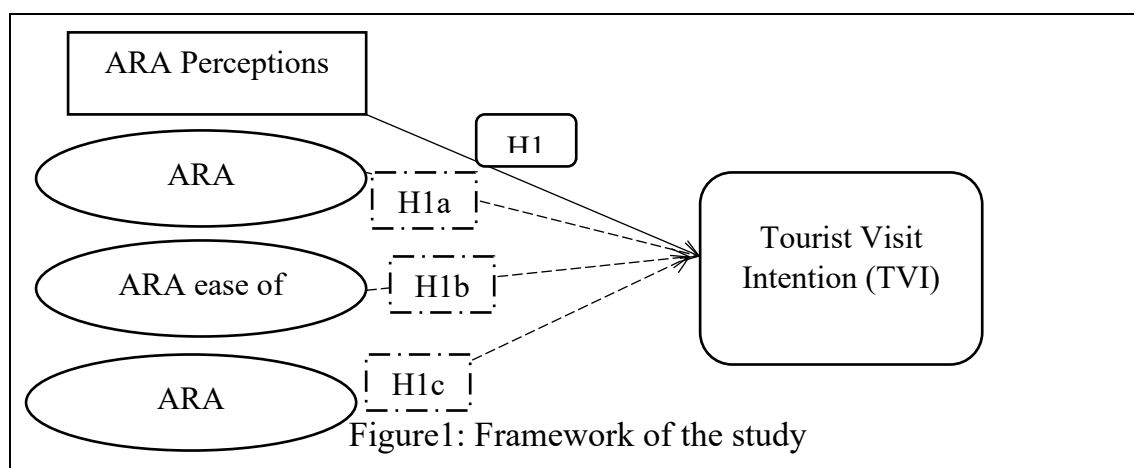
Research Hypothesis

H1: There is a statistical impact of AR applications on the tourists' visit intentions to hotels.

H1a: There is a statistical impact of AR applications usefulness on the tourists' visit intentions to hotels.

H1b: There is a statistical impact of AR applications ease of use on the tourists' visit intentions to hotels.

H1c: There is a statistical impact of AR applications enjoyment on the tourists' visit intentions to hotels.



Literature review

Definition of Augmented Tourism

In the field of tourism, theoretical studies did not provide a definition of augmented tourism. Aside from that, Usher (2023) stated that augmented tourism (AT) refers to a collection of displays and technologies that can overlay virtual information in real time in tourism-related environments. While Ding and Li (2022) defined the augmented tourism experience itself as "a complex construct which involves the emotions, feelings, knowledge, and skills resulting from the perception, processing, and interaction with virtual information that is merged with the real physical world surrounding the tourist." (Ding and Li, 2022, p27)

The augmented reality technology is defined as a system that integrates digital contents (such as, texts, images, videos, and 3D objects) with the user's perception of the real world, and through the use of smart glasses, tablet, and smartphone (Pottle, 2019, p.2). Based on previously existing definitions of augmented reality, an augmented tourism experience can be defined as "a cycle where an innovation can transport the tourist from their actual situation to an augmented simulation without affecting their actual transition, by controlling their senses in such a way that they become immersed in the augmented experience they are being transported to, until they become part of the surrounding landscape through the help of a computer model or mechanical devices that control the entire cycle."

AR Apps for tourism Sector

The Cleveland art museum uses ArtLens 2.0, one of the most significant pieces of software designed and produced by museums. The application's goal is to use image recognition software to display visitors' desires and interests in 2D. Visitors would also benefit from the ability to explore new roads using the map function, allowing them to get to their desired location faster. It can also alert them when they are getting close to the special work (Chung et al., 2015; Elsaed et al., 2022).

MiraAlicante is a mobile app that highlights the city of Alicante's important buildings and monuments. Increasing their visibility by displaying the specific characteristics of each content in order to provide information about them and facilitate tourist movement between the city's various relevant locations (McGivney et al., 2023).

Mobile Augmented Reality for Tourists (MARFT) is a project funded by the Austrian Federal Ministry of Transport, Innovation, and Technology (BMVIT) and the European Union's EUREKA Eurostars Programme to present the next generation of augmented reality for current mass market mobile phones with enough processing power to create a 3D environment on their monitors in real-time (Chung et al., 2019). This project plans to launch an interactive service for tourists visiting a dedicated test area. Tourists will be able to explore the surrounding scenery during local trips through the rural mountainous region by pointing the lens of their smart-phone camera towards the area of

interest (Lee and Kim, 2023). As soon as the viewfinder displays the region of interest, the tourist will be able to choose between two options: (a) an augmented photo with tourist details such as hiking tours or lookout points, or (b) a rendered 3D virtual reality view with the same view as the real photo but with tourist objects added. This option would be available if the view is obstructed by clouds or other roadblocks. In addition, the details overlay is interactive. A new window will appear when you click the overlay's markers and lines, displaying specifics on the selected tourist information, such as hiking trails, lookout points, and different mountain peaks (Hammady et al., 2023).

Advantages of AR Applications in Tourism

A key advantage of AR is that, in addition to its affordability, many people already own the necessary hardware. Smartphones and tablets are already equipped with the sensors, processing power, and displays needed for AR applications (Marie and Zaki, 2016). Another attractive feature is that a large number of potential users already have the necessary hardware. As AR software evolves, it is likely that only a few major AR client programs will become available (El Filali and Krit, 2018). A user simply needs to download one or two apps to their device to access a wide range of AR applications. In this case, the user will likely need to connect to a network to retrieve the content of these multiple apps, but many similar smart devices are already connected to a suitable network (Lee and Kim, 2023).

Furthermore, when using an AR application, users can use the necessary technology. In many cases, this means that they will use the necessary hardware regardless of whether they ever intend to experience AR (Ramadlani and Hadiwidjaja, 2012). Another advantage of AR technologies is that some AR applications only work on mobile devices. For example, if someone wants to see a simulation of airflow over the wings of a real jetliner, they can use a tablet on a parked plane, but they cannot transport the plane to an AR processing facility. Furthermore, AR is highly suitable for concepts such as "immersive learning," where the goal is for everyone to learn at any time, wherever they are, and whenever they need to (Bushara et al., 2023).

Barriers to Augmented Reality Applications in the Hotel Sector

The most serious of these barriers relate to the limitations imposed on AR applications by the technology itself, as well as the lack of control over the environment in which the mobile application will be used (Kazu and Kuvvetli, 2023). This can be explained as follows:

1. **Barriers to Augmented Reality Applications:** There are a number of barriers that limit the potential of AR applications, in addition to additional issues that programmers must address to overcome these barriers. The main barriers fall into two categories: a. Technological, b. Environmental. These barriers are closely related. They generally relate to the limited capabilities of mobile devices and the need for the application to operate in a wide range of environmental conditions (Lee and Park, 2022).
2. **Technological Barriers:** Limited resources. Even if the mobile system includes a head-mounted display, such as goggles, the field of view and level of detail are often limited. Memory is a major limitation on the amount of content that can be stored on a mobile device at any given time. There is a maximum number and variety of graphic and/or audio objects that can be stored on the device (Abd Elmaksoud et al., 2024).
3. **Environmental Constraints:** Developers often cannot predict the lighting, humidity, noise, and other environmental conditions that will exist in the location where the end user will experience the application. However, in all cases of AR applications and devices that use computer vision for tracking, it is essential that there is sufficient reflected light of the appropriate wavelength in the environment for the computer vision system to see the world as best as possible (Chen and Wu, 2022).
4. **User Understanding:** In fixed-location AR, the presence of AR content and how to interact with it can be clearly demonstrated. Mobile AR presents the challenge of content being available anywhere. Each person is likely to have more than one AR application at any given time. Furthermore, it is easy to understand how spam can confuse a world flooded with unwanted advertising or information. Moreover, what one person considers spam may be considered a

valuable asset by another. This disparity in users' understanding of mobile AR applications complicates software designers' efforts to engage them in the content they publish. However, contextual assistance systems integrated into AR applications may be one solution to overcome this limitation (Mostafa, 2024).

The Role of Augmented Reality in Tourist Visit Intention

Augmented reality technology and its applications are widely used in the tourism sector today, where it is used to enhance the visitor experience. On the one hand, multiple examples have shown that augmented reality can help tourism organizations and their staff reaches a wider audience by providing a platform for engaging multimedia information and mobile applications tailored to different levels of knowledge (Aziz and Friedman, 2019). On the other hand, augmented reality can enrich the historical aspect and enhance tourism by linking each geographical location to digital explanations (texts, videos, images, web links, audio guides) that include the names of historical buildings, their operating hours, the reason for their names, etc. All users need is a mobile device with the appropriate application installed to access all this information (Carvalho, 2022).

Moreover, there is no doubt that augmented reality technology and its applications are constantly thriving, effectively enhancing the competitive advantage of travel agencies and tourists themselves. Mobile phone screens become more engaging for tourists at first glance using overlay techniques (Chen et al., 2017). In this regard, augmented reality technology positively enhances the tourist journey in its three stages (Chung et al., 2015): it can increase visitor intention to visit (pre-visit), provide richer information and explanations, and learning and enjoyment (on-site), and increase spending and return intention (post-visit), thus improving the overall tourist experience (Chrisniyanti and Fah, 2022).

A study by Önder and Çakıroğlu (2021) showed that the tourist experience goes through three stages: pre-visit, on-site, and post-visit. The role of augmented reality is most prominent in the site phase, as it relies on seamless integration with real-world components. Its use is less pre- and post-visit, but virtual reality is increasingly being used. The tourism experience during a trip can be enhanced in several ways, resulting in new, memorable, exciting, and holistic experiences. Each of these enhanced tourism experiences is associated with a specific case study (use case scenario) (Abdou et al., 2022). The following figure illustrates the characteristics and use case scenarios of augmented tourism experiences.

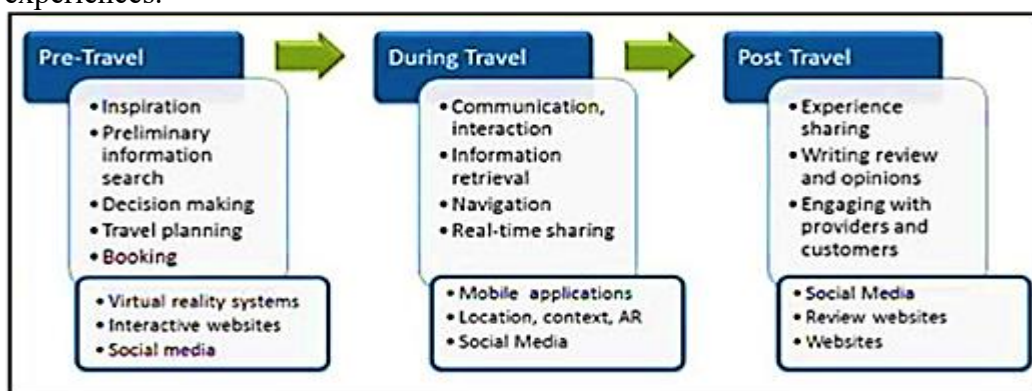


Figure 2: The Role of Augmented Reality in Tourist Visit Intention

Source: Molinillo et al., (2021)

Research methodology

Research population and sampling

The research and study community is represented in the guests who rely heavily on AR applications and five star hotels at Sharm Sheikh and Greater Cairo have been chosen. Greater Cairo have 28 five star hotels and five star hotels at Sharm Sheikh were 14 according to EHA, (2024). Due to the difficulty of determining the size of the community because it represents an open community and it

is difficult to develop a specific framework for it, the electronic questionnaire depending on Google Drive was used and made available to a larger community of participants who used AR applications before the hotel reservation in the investigated hotels.

Data Collection Tool

The search tool is the questionnaire and for the purposes of this research, a survey list has been prepared electronically through the Google Drive website and is answered by the respondent and was provided and distributed on December 25, 2024 until March 5, 2025, and the survey was divided into several axes, the first axis related to tourists perceptions towards AR applications, and the second axis related to the tourists visit intentions. The questionnaires were distributed on 450 tourists who used AR applications before the hotel reservation with 402 (89.3%) questionnaires valid to statistical analyze.

Data Analysis

The respondents were asked to answer these statements by using a five-point Likert-type scale. The Statistical Package for the Social Sciences (SPSS) version 27.0 was used to analyze data. Afterwards their answers classified to (1= strongly disagree, 5= strongly agree). The level of agreement range was calculated as follow:

Table 1: Questions Answered Scale

Category	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Code	1	2	3	4	5
Range	1 – 1.80	1.81–2.60	2.61-3.40	3.41–4.20	4.21 - 5

Reliability Analysis

Table 2: Reliability Analysis

Number of Statements	Alpha
19	0.887

Table 2 indicated that alpha coefficient of the questionnaire statements was 0.887 (higher than 0.70) (Taber, 2018). This result indicated the reliability and validity of the questionnaires for using in the study.

Results and Discussion

Table 3: Demographic Data of Respondents

Demographic Data	Attribute	Statistics		
		Freq	%	Rank
Gender	Female	149	37.1	1
	Male	253	62.9	2
Total		402	100	
Age	Less than 25 years	44	11.2	1
	From 25 : 40	205	51.1	3
	More than 40 years	151	37.7	2
Total		402	100	
Academic level	Average	17	4.2	1
	Above average	69	17.2	3
	university	273	67.9	4
	Postgraduate Studies	43	10.7	2
Total		402	100	

The results presented in Table 3 indicated that 62.9 of the respondents were male, meanwhile, 37.1 were female. With regard to the ages of the respondents, 51.2% of the respondents were aged between 25 to 40 years, followed by those aged over 40 years at 37.7%, then those aged less than 25 years at 11.2%. This result concludes that the majority of investigate guests were in the youth category. With regard to educational level, 67.9 of the respondents have a bachelor's degree Then 17.2 of the respondents were with above average qualifications, then 10.7 of the respondents were those with postgraduate studies, then 4.2 of the respondents were with average qualifications, that's mean the majority of tourists have high educational level.

Table 4: tourist's perceptions towards AR applications

Statement	5-Point Likert – Scale						Statistics		
	○	4	3	๒	๑	X	SD	R	
AR applications usefulness									
AR applications assist you to gather information about the hotel	N	146	128	113	4	11	3.98	1.089	2
	%	36.3	31.8	28.1	1	2.74			
AR applications contribute in explore the trip/hotel	N	59	212	109	14	8	3.74	1.077	4
	%	14.7	52.7	27.1	3.48	1.99			
AR applications provide information about the products or services offered by the hotel, supported by images and evidence.	N	77	199	106	13	7	3.81	.998	3
	%								
AR applications assist you to take a right decision about hotel’s reservation	N	134	187	72	7	2	4.10	.754	1
	%	33.3	46.5	17.9	1.74	0.5			
AR applications ease of use									
AR applications provides you with a personal connection with it	N	89	77	157	55	24	3.38	1.283	2
	%	22.1	19.2	39.1	13.7	5.97			
AR applications contains a complete group of illustrative images and video files regarding the hotel facilities	N	89	189	40	57	27	3.64	1.252	1
	%								
AR applications provides a search tool for the products and services required by the user	N	65	68	147	99	23	3.13	1.189	4
	%	16.2	16.9	36.6	24.6	5.72			
AR applications is easy to use, understand and deal with	N	53	44	232	54	19	3.14	1.073	3
	%	13.2	10.9	57.7	13.4	4.73			
AR applications enjoyment									
AR applications Enhance my travel and fun experience	N	168	123	87	17	7	4.07	.837	2
	%	41.8	30.6	21.6	4.23	1.74			
AR applications makes it a pleasure to participate in the hotel	N	177	131	65	17	12	4.11	.960	1
	%	44	32.6	16.2	4.23	2.99			
AR applications Pre/post treatment provided to you is satisfactory	N	108	209	67	13	5	4.00	.861	4
	%	26.9	52	16.7	3.23	1.24			
AR applications in hotels makes you enjoyable	N	129	189	71	9	4	4.06	.792	3
	%	32.1	47	17.7	2.24	1			
Average of Responses							3.76	1.013	--

N= 402 \bar{x} : Mean SD: "Standard Deviation", 1=Strongly Disagree 2=Disagree
3=Neutral 4=Agree 5=Strongly Agree

The results in Table 4 showed that the tourists were have good perceptions towards AR applications (AV Mean= 3.76, SD= 1.013). According to AR applications usefulness, tourists agreed that AR applications assist them to take a right decision about hotel's reservation (mean = 4.10, SD = 0.754). Tourists found that AR applications assist them to gather information about the hotel (mean = 3.98, SD = 1.089), and provide information about the products or services offered by the hotel, supported by images and evidence (mean = 3.81 and SD = 0.998). Finally, AR applications contribute in explore the trip/hotel ((mean = 3.74, SD= 1.077). This result in agreement with Ramadlani and Hadiwidjaja, (2012) that when using an AR application, users can use the necessary technology. In many cases, this means that they will use the necessary hardware regardless of whether they ever intend to experience AR.

With regard to AR applications ease of use, tourists agreed that AR applications contains a complete group of illustrative images and video files regarding the hotel facilities (mean = 3.64, SD = 1.252). This result agreed with El Filali and Krit, (2018) that AR software evolves, it is likely that only a few major AR client programs will become available. Tourists found that AR applications to some extent provides them with a personal connection with it (mean = 3.38, SD = 1.283), and it is partially easy to use, understand and deal with (mean = 3.14 and SD = 1.073). This result agreed with Lee and Kim, (2023) that users simply needs to download one or two apps to their device to access a wide range of AR applications. In this case, the user will likely need to connect to a network to retrieve the content of these multiple apps, but many similar smart devices are already connected to a suitable network. Finally, AR applications to some extent provides a search tool for the products and services required by the user ((mean = 3.13, SD= 1.189).

According to AR applications enjoyment, tourists agreed that AR applications makes it a pleasure to participate in the hotel (mean = 4.11, SD = 0.960). Tourists found that AR applications Enhance their travel and fun experience (mean = 4.07, SD = 0.837), and AR applications in hotels makes them enjoyable (mean = 4.06 and SD = 0.792). Finally, AR applications Pre/post treatment provided to them is satisfactory (mean = 4.00, SD= 0.861). This result agreed with Abdou et al., (2022) that the role of augmented reality is most prominent in the site phase, as it relies on seamless integration with real-world components. Its use is less pre- and post-visit, but virtual reality is increasingly being used. The tourism experience during a trip can be enhanced in several ways, resulting in new, memorable, exciting, and holistic experiences. Each of these enhanced tourism experiences is associated with a specific case study (use case scenario).

Table 5: Tourists intentions to visit the hotel

Statement	Statistics Point Likert – Scale								
		5	4	3	2	1	X	SD	R
Viability									
I plan to visit the hotel that I have seen by AR.	N	178	185	32	5	2	4.32	.701	1
	%	44.3	46	7.96	1.24	0.5			
I intend to make a reservation on the hotel that I like based on AR interaction.	N	134	154	98	11	5	3.99	.827	2
	%	33.3	38.3	24.4	2.74	1.24			
	N	15	239	119	17	12	3.57	.957	7

I find the hotel AR service and performance superior to others.	%	3.73	59.5	29.6	4.23	2.99			
I am very likely to visit the hotel recommended by my friends on AR platforms.	N	65	235	93	9	0	3.88	.782	4
	%	16.2	58.5	23.1	2.24	0			
The AR service provided exactly reflected my needs.	N	54	189	114	34	11	3.60	.811	6
	%	13.4	47	28.4	8.46	2.74			
I speak positively about my e-treatment experience	N	110	170	86	27	9	3.85	.836	5
	%	27.4	42.3	21.4	6.72	2.24			
I prefer the treatment with the hotel to the others	N	99	184	99	15	5	3.89	.845	3
	%	24.6	45.8	24.6	3.73	1.24			
Average of Responses							3.87	0.822	---

N= 402 \bar{x} : Mean SD: "Standard Deviation", 1=Strongly Disagree 2=Disagree
3=Neutral 4=Agree 5=Strongly Agree

The results in Table 6 showed that the respondents have a real intentions to visit the hotel based on their AR experience (AV Mean= 3.87, SD= 2.822). This result agreed with Chung et al., (2015) that augmented reality technology positively enhances the tourist journey in its three stages: it can increase visitor intention to visit (pre-visit), provide richer information and explanations, and learning and enjoyment (on-site), and increase spending and return intention (post-visit), thus improving the overall tourist experience (Chrisniyanti and Fah, 2022).

Tourists plan to visit the hotel that they have seen by AR (mean = 4.32, SD=0.701), and they intend to make a reservation on the hotel that they like based on AR interaction (mean = 3.99, SD=0.827). Tourists prefer the treatment with the hotel that apply to the others (mean = 3.89, SD= 0.845). Based on tourists opinions, they were very likely to visit the hotel recommended by their friends on AR platforms (mean = 3.88, SD=0.782). This result agreed with Aziz and Friedman, (2019) that augmented reality can help tourism organizations and their staff reaches a wider audience by providing a platform for engaging multimedia information and mobile applications tailored to different levels of knowledge. In addition, tourists spoke positively about my e-treatment experience (mean = 3.85, SD=.836) as result of AR service provided exactly reflected my needs (mean = 3.60, SD=0.811). Finally, tourists found the hotel AR service and performance superior to others (mean = 3.57, SD=.957). There is no doubt that augmented reality technology and its applications are constantly thriving, effectively enhancing the competitive advantage of hotels and tourists themselves. Mobile phone screens become more engaging for tourists at first glance using overlay techniques (Chen et al., 2017).

Table 6: R2 coefficient to study the interpretation of the independent variable for the Tourists visit intentions

R	R Square	Adjusted R Square	Std. Error of the Estimate
.711a	.506	.509	.76880

According to the coefficient of determination R2 in Table 6, the dimensions of the independent variable explain about (51%) of the tourists visit intentions and the rest (49%),

may be due to a random error in the equation, or perhaps because other independent variables were not included. It is meant to be included in the form.

Table 7: Significance test of quality-fit regression model

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	238.711	4	58.924	113.121	.000 ^b
	Residual	234.258	397	.593		
	Total	472.969	401			

* Significance at 0.01 or less

To test the significance of the variables of the model as a whole, as shown in Table 7, the F-test was tested, where the values of F (113.121), which are statistically significant at a level of significance less than (0.01), which indicates that the variables related to each of AR in hotels (AR applications usefulness, AR applications ease of use, AR applications enjoyment), is the most influential on tourists visit intentions.

Table 8: T-test to study the effect of the independent variables on the tourists visit intentions

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.435	.123		3.621	.000
	ARA usefulness	.188	.046	.187	3.891	.000
	ARA ease of use	.119	.048	.116	2.360	.024
	ARA enjoyment	.332	.044	.358	6.998	.000

* Significance at 0.05 or less

From the T-test as shown in Table 8, it could be conclude that there is significant impact from independent variables in the multi-linear model are (AR applications usefulness, AR applications ease of use, AR applications enjoyment) at a level of significance less than (0.05%), on tourists visit intentions. And then it is clear that the first sub-hypothesis (H1a) of the main hypothesis is accepted with regard to the dimensions (AR applications usefulness, AR applications ease of use, AR applications enjoyment), and to increase tourists visit intentions in the hotels in Egypt. This result agreed with Aziz and Friedman, (2019) that augmented reality technology and its applications are widely used in the tourism sector today, where it is used to enhance the visitor experience. On the one hand, multiple examples have shown that augmented reality can help tourism organizations and their staff reaches a wider audience by providing a platform for engaging multimedia information and mobile applications tailored to different levels of knowledge.

Conclusion

This study attempts to understand the role of Augmented Reality (AR) applications, especially AR applications, as a marketing tool that contributes to improving customers' intention to book hotels. The findings and results of this case study present the impact of AR with its dimensions (AR applications usefulness, AR applications ease of use, AR applications enjoyment), and to increase tourists' visit intentions in the hotels in Egypt. From the study, it was found that all the dimensions of AR have a positive impact on tourists' visit intentions. Besides, AR is able to extend its client base to include hotels, reservation facilities, and other tourism industry stakeholders. As a result, hotels should consider incorporating AR into their apps. Similarly, AR will elevate the work of tourism and hospitality establishments, by designing custom mobile apps for their companies and knowing about AR technology itself. Besides, AR applications provide data, including descriptions of tourist attractions, restaurants, and monuments. Other important information, such as WiFi hotspots, ATMs, car parks, transportation, local news, and weather, can be displayed in AR-view. Tourists can access geo-coded user-generated material such as tweets, videos, and photographs, as well as comments and recommendations about a location using a variety of programs.

Recommendations

1. Using the designed AR application which can be used as an alternative or complement to the traditional photos and video, thus solving some of the problems facing tourists regarding tourist reservations.
2. Using the designed AR application to exploit the benefits of this AR application in enhancing tourists' behavioral intentions toward the hotels, thus supporting the reservation levels and the marketing practices area in particular.
3. Designing and developing many AR applications in the hotel sector, and encouraging the different AR application specially mobile AR to adopt and implement the AR, in order to exploit the benefits of AR technology in the hotel sector and support the Egyptian tourism.
4. Encouraging researchers and academics to conduct further studies and research on the use of AR technology in tourism to determine its potential advantages. These studies provide useful information and ideas for academics and practitioners alike.
5. Understanding the tourists' behavioral intentions and what influences their loyalty to the hotels to develop and implement effective marketing strategies, achieve a competitive advantage, enhance tourism sustainability, support the Egyptian tourism and generate a financial success.

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