The role of activating smart tourism applications in presenting factors of tourism attractions in Algeria

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دور تفعيل تطبيقات السياحة الذكية في عرض عوامل الجذب السياحي في الجزائر

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Abstract: This study aims to explore the importance of activating smart tourism applications in displaying tourism attractions in Algeria, which directly contribute in building the image of the smart city that has become one of the basic principles on which countries 'strategies are designed, as many have adopted information and communication technology applications in all fields to improve the quality of life and its effectiveness and its economic sustainability and especially the development of its tourism sector, in order to ensure sustainable development of tourist areas. The results of this study have shown that there are some efforts made to activate applications that provide platforms for tourist attractions in Algeria, but still it remains weak and insufficient to highlight the tourism attraction factors.
Keywords: Smart applications; smart tourism; smart city; attraction factors

Résumé : Cette étude vise à explorer l'importance d'activer les applications du tourisme intelligent dans la présentation des attractions touristiques en Algérie qui contribuent directement à la construction de l'image de la ville intelligente qui est devenue l'un des principes de base sur lesquels les stratégies des pays sont conçues, comme beaucoup ont adopté des applications des technologies de l'information et de la communication dans tous les domaines pour améliorer la qualité de vie et son efficacité et sa pérennité économique et notamment le développement de son secteur touristique, afin d'assurer le développement durable des zones touristiques. Les résultats de cette étude ont montré que des efforts sont faits pour activer les applications qui fournissent des plateformes pour les attractions touristiques en Algérie, mais cela reste faible et insuffisant pour mettre en évidence les facteurs d'attraction touristique.
Mots-clés : applications intelligentes; tourisme intelligent; ville intelligente; facteurs d'attraction

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ملخص: تهدف هذه الدراسة إلى استكشاف أهمية تفعيل تطبيقات السياحة الذكية في عرض عوامل الجذب السياحي في الجزائر والتي تساهم بصورة مباشرة في بناء صورة المدينة الذكية التي أصبحت تعد من المبادئ الأساسية التي تصمم على أساسها استراتيجيات الدول، فالعديد منها تبنت تطبيقات تكنولوجيا المعلومات والاتصالات في جميع المجالات لتحسين نوعية الحياة وفعاليتها ولتحسين إقتصادها وإستدامتها وتطوير قطاعها السياحي خصوصا لكي تضمن التنمية المستدامة

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للمناطق السياحية، وقد أبرزت نتائج هذه الدراسة أنه توجد بعض الجهود من أجل تفعيل تطبيقات توفر منصات عروض لمناطق الجذب السياحي في الجزائر ولكنها تبقى ضعيفة وغير كافية لإبراز المقومات السياحية.

الكلمات المفتاح : التطبيقات الذكية؛ السياحة الذكية؛ المدينة الذكية؛ عوامل الجذب السياحي

I- Introduction :

The tourism sector is one of the most prominent sectors that have moved towards the smart electronic world, so the tourist no longer depends in his planning of trips on boring traditional methods neither on tourism companies as well, whether it comes to reservations, tickets or other forms of tourism operations, the global tourism work methodology is moving towards smart tourism with steady steps competing with the rest of the other economic sectors.

Most tourists around the world need specific information at crucial times and places, and therefore smart tourism is the best way to provide valuable opportunities for them so that they can follow the guided tours, choose lower prices, use interactive maps and always receive information everywhere in the discounts around the world. Thanks to the mobile applications as well, it is possible to provide the user with additional information about tourist attractions, or accurate knowledge of offers or even see them in the real environment in which it travels in a virtual form in two or three-dimensional (D3, D2).

Algeria recently is also one of the countries that strives to develop its tourism sector in the context of achieving an economic diversification policy to get out of the hydrocarbon sector's dominance and try to provide new sources of income for hard currency, by promoting the tourism attractions that it owns and highlighting its most beautiful products and touristic monuments that can be relied upon for the advancement of this sector.

I.1. Statement of the problem

In light of the above, **did Algeria seek to take advantage of smart tourism applications to present its various factors of tourism attractions?**

I. 2. Research questions:

The analysis was guided by the following question:

- What is smart tourism?
- What are the most used applications for tourism around the world?
- What are the main tourism attractions in Algeria?
- What are the smart applications activated in Algeria used to present tourism attractions?

I. 3. Significance of study:

Most countries have recognized the importance of promoting their tourist destinations through smart applications, because of its great importance to attract a large number of tourists by offering them tempting offers of organized trips using simple clicks, and through this research we

will try to highlight the need to pay attention to activating smart tourism applications in Algeria in order to promote the desert tourism and its factors of attraction because of its importance in increasing the number of tourists and the development of the whole sector

I. 4. Methodology:

The study adopts a main methodological approach includes an exploratory survey looking for activated smart applications that show tourism attractions in Algeria.

II– Basic concepts of Smart Tourism:

Many countries of the world started using information and communication technology applications in all fields to improve the quality and effectiveness of life and to improve their economies and sustainability, the thing that led to the emergence of the concept of smart cities that aims to provide solutions based on effective technology and high efficiency. The tourism industry is also an important element and an effective factor in building smart cities, therefore it has an important weight in the strategy of smart cities, and the future direction of smart tourism has become primarily reflecting intelligence in each of: services, business, projects, administration, governmental and non-governmental institutions. And all this is one of the important factors that fall on the monarch of attractions.

II.1. Definition of smart tourism:

Mobile devices are the tools that are more present in our daily life than ever before, which made it an important factor affecting significantly the behavior of individuals, especially those related to modern travel. Smart Tourism has emerged over the past few years as a subset of the concept of Smart Cities and from this standpoint, these developments have entered into the concept of tourism by giving and introducing various tools and applications from information and communication technology to smart tourist attractions, and to learn more about this modern concept it will be defined as follows:

Ulrich Gretzel said that Smart Tourism is a new way to manage tourist flows, better tourism services, new advertising models and new collaborative projects that rely on cloud services and open data for innovation beyond the boundaries of traditional tourism (Ulrike Gretzel,2016). While Khaled Adas mentioned that using smart tourism have become the key to most tourism tools and sites in the tourism industry for civilized and developed tourism fronts, these tools include: (IOT, RFID, NFC, Cloud Computing, Big Data) (Khaled Adas,2018). Kim Bose defined Smart Tourism as a platform that implements information and communications technology such as artificial intelligence, cloud computing and the Internet of things to provide tourist with personal information and to improve services created by end-user mobile devices (Amelie Nabben,2016,p11). As for Kim Dongwook Smart Tourism is tourism that collects and integrates data about destinations, provides rich site experiences for users with the support of mobile technology, and creates value from a business perspective, data sources include physical infrastructure, social connections, governments / organizations, and human bodies / minds, and these integrated efforts are supposed to focus on efficiency and sustainability (Dongwook & Sungbum,2017,p7). But others see that Smart tourism can is a logical development of traditional tourism and e-tourism in recent times, clearly dependent

on the ability to collect massive amounts of data, process, integrate, analyze and use it to inform innovation in business, operations and services (Marianna Sigala,2015,p179).

Finally, we can say that smart tourism is the use of smart device applications based on information and communication technology to devise a system of support and service for tourists anywhere and anytime by means of a set of smart, and the difference between electronic tourism and smart tourism must be clarified through the following table:

Table (1) : The difference between e-tourism and smart tourism.

	Electronic tourism	Smart tourism
The field	Digital	Digital and physical connection
Technology	Locations	Devices and mobile phones
Stage of travel	Before and after traveling	During the flight
Source	the information	Big data
Sample	Interaction	Technology participation in construction
The structure	Value Chain / Intermediaries	environmental system
Exchange	B2B, B2C, C2C	Cooperation between the public, private sectors and consumer

The source : Marianna Sigala and others, 2015, p: 182.

II.2. Smart tourism requirements:

Smart tourism relies on multiple smart components supported by information and communications technology, which can be illustrated through the following figure:

Figure (1): Smart tourism requirements.
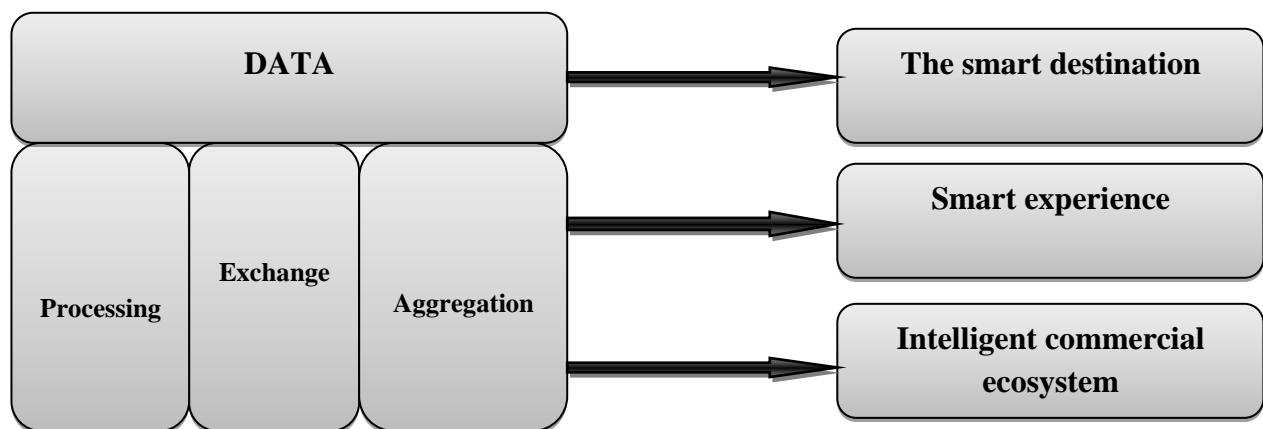
The source: Ulrike Gretzel, 2016,p:181.

This figure shows us the most important requirements for smart tourism starting from the smart destination, which is an important part of the smart city principle, which is required to be built on a basic foundation of modern technology that guarantees sustainable development for tourist areas, it should also be available to everyone to facilitate the interaction and integration of tourists, which increases the quality of the tourist experience. In addition to the inclusion of the destination component, smart tourism is a social phenomenon arising from the convergence of information and communications technology with the tourism experience. The smart experience component focuses in particular on tourism experiences that are traded by technology and that are documented and strengthened through diagnosis and awareness texts published by tourists and follow-up in real time, smart tourists use smartphones to take advantage of the information infrastructure provided at the destination in order to add value to their experiences. As for the third component, it refers to the complex intelligent commercial ecosystem that creates and supports the exchange of tourism resources and the joint creation of the tourism experience through linking stakeholders, the digitization of basic business operations and the organizational agility.

II.3. The advantages of Smart tourism:

Smart tourism has many advantages (Buhalis& Amaranggana,2014,p553), including:

- Smart tourism includes smart tourism experiences;
- It allows tourists to better communicate and interact with cities and establish closer relationships with residents, local companies, local government and city landmarks;
- It points to a new smart tourism economy with new resources, new actors, and new paradigms of exchange;
- Smart Tourism supports the development of cities and services in different ways;
- Promote continuous innovation in hardware, software applications and network developments, smart City can respond quickly, effectively and efficiently to tourism needs and be able to outperform competitors and maintain prosperity in the long run;
- Apply smart city principles and urban or rural infrastructure that not only harness the big data of the population but also tourists in their efforts to support mobility, resource availability, allocation, sustainability and quality of life.

III- The most used smart tourism applications across the world:

The best travel applications work in real time and seek to maintain the knowledge of all subscribers about everything that is new, it not only provides information, but also provides tips, ideas and warnings from the time you start thinking about your next tourist destination to the moment you return, convenient smart travel apps help make the whole experience smoother and less stressful. On this list the top ten travel apps of 2019 (Simon Hill, 2019):

III.1. Pack Point app:

The role of this app is to create a detailed listing of the proposed supplies for your bag that you need depending on the type of trip.

III.2. Google Maps app:

One of the best applications that helps tourists to navigate easily while traveling, thanks to electronic maps, most smart phone users know the importance of this application, but what most users may not know is that it is possible to download all the data, maps and cities that you need and you intend to visit to the Google Maps application in advance and thus can be used even if the internet is not available.

III.3. Google Trips app:

Creates a basic framework for your trip without having to do a lot, you can browse the application from seeing the trips in addition to suggested common places to visit or eat, and enables you to plan throughout the day. Google Trips allows you to store this data, so you can access the itinerary and all important information at any time.

III.4. Trip Advisor app:

The universal app when it comes to travel, you can quickly see millions of opinions, videos and photos related to your trip such as restaurants, hotels, airlines and more. You can use it as well to find places that are well reviewed near you, but the best feature offered by the application is the number of countries it supports, they are almost everywhere, which makes it a necessary guide for every traveler.

III.5. City mapper app:

It introduces you to the best means of transportation and how you can order it such as public transportation, walking, bicycles, subway, buses, trains, and other companies that provide the same service. It also tells you the cost of these services in the city, is it available in the place where it is located or not, but as for the only defect of this application, it is that you should be connect to the internet in order to know this data.

III.6. Sky scanner app:

The app searches for the most reasonable prices and the best options through travel partners such as Google flights, you can follow the cheapest travel dates, and also get alerts when prices change.

III.7. Airbnb app:

The app works to compete with hotel prices by offering much cheaper rates and a more realistic experience by allowing users to stay with the locals in their homes. The app also provides a feature called Trips, which provides experiences to choose during your stay.

III.8. Triplt app:

It is considered one of the best travel applications that cannot be dispensed with as it helps to collect plans and trips in one place and follow them with ease including flights and hotel reservations as well as trips within the destination country. It also directs flight paths and other travel emails to a private address.

III.9. XE Currency app:

It is one of the most powerful currency conversion apps available for both IOS and Android, it is constantly updated and offers live exchange rates for every global currency and even precious metals.

III.10. Google Translate app:

It is one of the most famous applications and the hope of those who do not speak foreign languages, the application can be used without an internet presence, but the required languages must be downloaded in advance.

IV- Tourist attractions in Algeria:

Algeria is one of the countries that have a unique nature that made it the focus of Arab and Western travelers since ancient times, it was also considered as a special destination for tourists from all parts of the world due to the great diversity of tourist attractions, it is distinguished by a diversified and integrated tourist offer that includes natural, cultural and historical resources, along with other elements that will be identified.

IV.1. Natural resources in Algeria:

Algeria is located in North Africa, between the longitude 9 ° west of Greenwich and 12 ° east between latitudes 19 ° and 37 ° north. It has an area of 2,381,471 km^2, and its north-south extension is 1900 km while its eastern-western extension ranges between 1,200 km on the coastline and 1,800 km on the Tindouf Ghadamis line (The economic and social guide for Algeria,2000,p1). The large area of Algeria led to a variety of natural resources that differ from one region to another in different geographical locations. The most important of these are the following:

- **The Coastline**: The Algerian coastal strip is characterized by its length which is interrupted by beaches and bays, as it contains marine ecosystems, sand dunes and systems near forests from east to west and these coasts are formed from rock blocks that sometimes their height increases to 1000 m, and they have established several cities and recreation centers near these coastal highlands, and they have been equipped with hotels and summer camps such as: Zeralda, Al-Qala, Tuqrirt, Sidi Faraj, Ain-Turk, Burj Al-Kifan(Sidiki Souad,2006,p95).

- **Mountainous regions**: represented in the Atlas hill that extends from east to west in the form of a group of torsional mountain ranges that constitute an opportunity for the prosperity of exploratory tourism including the heights of Shariaa which allows tourists to practice skiing, in addition to the kabyle mountains, which constitute natural gardens and in which the tourist station of Tikajda was established, while the desert atlas hills which is a 700 km mountainous system, is a barrier in the face of the sands of the desert and includes semi-parallel heights, the most important formations are the Ksour mountains (2238 m), the

Amour mountains (1930 m) , Ouled Neyel mountains (1600), Aures mountains (2380 m), which are different from the Atlas hill in terms of climate, landscape and vegetation cover (Mohammed Laaroug,2002,p18).

- **Algerian Desert:** Algeria has the largest desert region with about two million square kilometers distributed over four major regions: **Adrar region** which is located in the southwest, it is considered primarily tourist because of its natural scenery and ancient ruins, as the presence of man in the Algerian desert. **Elyzi region** is represented by the Tassili Najer which is considered as the most important and known as the Tassili Garden, classified as a World Heritage since 1982 by UNESCO. **Wed Mizab region** is classified as a World Heritage because of its historical, urban and architectural aspect, which includes the following cities: Bani Yazgen, Bunuwarah, orchards of palm trees. **Tamanrasset region** or Al-Hoggar, which covers an area of 113,000 km^2, contains the National Park that was established in 1987 and which is characterized by the presence of rare animals and plants and inscriptions on the rocks dating back to the past centuries (Huda Hafsi,2006,p37).

- **Mineral Sites:** the National Institute for Tourism Studies has identified 202 mineral water sources, most of them in the north of the country, and the physical, chemical and hydrogeological analyzes have identified more than eight types of water. In front of this water, health and recreation centers were constructed, including a seawater treatment center in Sidi Faraj, Hammam Gargour, Hammam Righa and others (Economic and Social Council,2000 ,p70).

IV.2. Cultural and historical resources in Algeria:

Algeria has various historical and civilizational features made it a cradle of human civilization and a living testimony to its affiliation with the Islamic, Mediterranean and African space. The archaeological monuments, museums, and historical documents that exist in Algeria bear witness to the age and greatness of successive civilizations, from the Amazigh to the Phoenician, then the Byzantine, the Romanian, and finally the Islamic ones which imposed itself, and the witness on it is the fortress of Bani Hammad, Bejaia, which was classified as a historical world heritage (Economic and Social Council,2000 ,p80).

The handcraft heritage also plays an important role in presenting a picture of the country through the products offered by craftsmen and reflects their civilization and culture. Algeria has a traditional heritage whose roots extend to the depths of history and it is an honest expression of Algerians lifestyles. The role of traditional industry in promoting tourism is as important as the role of tourism in developing the economy; therefore, attention must be given to this aspect to develop it. Among the most important traditional industries that characterize Algeria are: pottery, silver and gold jewelry making, carpet making, embroidery on fabric, copper and traditional clothing (Seffari Asma,2015,231).

In addition to this entire heritage, the cultural and historical heritage of Algeria has a number of museums, including: **Bardo National Museum** situated in Algiers and displays fossils

on the origin of peoples (ethnography), and others dating back to prehistoric times, in addition to African artifacts; **Cirta National Museum** located in Constantine and displays a large collection of excavations discovered in this region; **The National Museum Zabana** located in Oran, includes fossils on prehistoric times, on natural sciences and on the origin of peoples. **The National Museum of Fine Arts** located in Hamma, it displays modern art such as painting and sculpture; **The National Museum of Folk Art** located in the Kasbah, it contains exhibits on traditional crafts, and folklore; **Temgad Museum** situated in Batna, includes mosaics and antiquities including money, weapons and statues; **Hippon Museum**, located in Annaba, it contains ancient ruins that reflect the history of this city (Economic and Social Council, 2000 ,p339).

V- The reality of using smart tourism applications to attract tourists to Algeria:

Applications and electronic sites provide all the information about the Algerian tourism regions and the characteristics of each one, and highlight the elements of tourist attraction provided by modern technology, so that the tourist can see everything related to tourism sites, and compare them in terms of prices and services, and then take his decision to purchase the tourism product, also, the digital applications that Algerian youth are working on developing in recent years are not possible to count, they aim to change people's lives and facilitate the difficulties facing them in various fields, and it seems that thinking about finding digital solutions to the problems of daily life has become dominated by technology enthusiasts thinking in Algeria, in the belief in "the fourth industrial revolution" where would be a digital solution for each problem. And through this part, we will try to get acquainted with the most important Algerian smart electronic applications that are concerned with the promotion of Algeria as a tourist destination and show its various attractions.

V.1. ONAT Instinct of Travel application:

This application is currently responsible for the marketing of Algeria as a destination and the development of national tourism, was launched in 2017 by the agency GCA, affiliated with the Algerian National Bureau of Tourism, and since 2011 the company has been attached to the Ministry of Tourism and Crafts as a non-subsidiary (https://www.onat.dz, 2018).

This free application displays all the services provided by the company and provides the opportunity for the browser to identify all the attractions of Algerian tourism of all kinds and focus on desert tourism in particular to attract foreign tourists and all this with a simple click on the various pages that this application contains.

In the word of the general manager of the company, Mohamed El Sharif Slatnia presented on this application, he confirms that with long experience in the field of travel that extends for more than 30 years, ONAT has gained a local and global reputation as a primary operator and a pioneer in the tourism market, and to maintain this leadership position, the company's management team developed an ambitious administrative and commercial strategy that resulted the implementation of a business plan represented in designing new products and investment projects, training employees of the company, implementing an innovative marketing approach supported by an adaptive communication plan with various technological developments and market and competition requirements, promoting new tourist outlets (mineral, cultural, memory tourism and desert tourism). In particular, emphasis was placed on the renewal of the city "THE RESIDENCE ONAT" in Janet in order to develop tourist villages in the Big South, and the acquisition of modern tourism

transportation, and the development of a sales promotion network in order to provide high-quality service.

In the context of promoting desert tourism and displaying the various factors that attract it, this application reviews a set of special offers for foreign tourists with pictures and videos about the wonderful desert areas, in addition to proposing plans for trips with the possibility of reservation and comparison of prices.

V.2. Dzair Voyages application:

It is an application that brings together the offers of Algerian tourism agencies, was established in 2015 with a size of 3.9 MB and its current version 1.9, as it was updated on 9 February 2018. This application is your personal travel agency that allows you to access all travel offers in Algeria, enabling you to consult, search and save offers, when you open this application, the logo used for you, which is very special and reflects the volume of services available, is encountered: **"A travel agency in your pocket"** (contact@dzairvoyages.com,2019).

After downloading this free and simple application, the Algerian or foreign tourists can browse the content smoothly and simply, and can also switch between the available offers according to suggested categories from the application that include organized trips, cruises, accommodation, tours and others. As for desert tourism, the application promotes many wonderful destinations such as: Djanet, Tamanrasset, Timimoun, Zulfana Ghardaia, Biskra and others with accurate pictures and prices and all information related to the trip and how to spend it day by day, and among the phrases used trying to attract tourists towards desert tourism is what was written about Djanet as the pearl of the desert: Along the walls, man has left traces of his passage about 12,000 years ago, this series is a meeting with the virgin landscapes carved through time, Tadrart (which is located 200 km southeast of Djanet) is considered " the pearl of Tassili Najer ", and it is one of the most beautiful desert areas in the world mixing huge grooves with carved cliffs and rocky peaks of various shapes with colored sand dunes with yellow and red light (https://dzairvoyages.com,2019).

V.3. SIYAHA DZ tourism Application:

This application is the idea of the Algerian company Touch In Motion, which announced the official launch of the first version of its connectivity platform for tourism agencies "SIYAHA DZ" July 2016 with a version 1.0 that provides travel offers. The purpose of this application is to discover travel agency offers for public while highlighting the most beneficial destinations for the tourist to allow him to reach his best destination objectively (https://www.android-dz.com, 2019).

In fact, the operation of this platform is simple for tourists as for agencies and users can download the application freely from Google Play Store and request residency in just few clicks. The agencies register by paying a small fee and are not subject to a digital goal, this application also aims to provide more clarity to foreign tourists the various Algerian destinations with a detailed

presentation of the most attractive areas with pictures, prices and direct contact methods for organizing Unforgettable trips. The developers of this application have promised to launch new updates, which will bring many features, especially the possibility of booking airline tickets and ships, as well as hotel reservations in Algeria, but this step will remain hostage to the launch of electronic payment services in Algeria.

V.4. Oued Kniss Travel application:

This application is one of the most popular applications for Algerians, it was launched in 2006 by young people pushed by the closure of the real market Oued Kniss located in Qubba, which was famous by buying and selling everything in it, after that it evolved and registered 250 thousand visits per day. As an Algerian site, it is the first of its kind to obtain such numbers, also in the context of its diversification policy, workers on improving this site added the service Oued Kniss Travel.

This application also depends on Trip Advisor application in its evaluation of the available offers of hotels in terms of prices, quality of services and opinions of tourists, in addition to providing all the details about the sites of hotels and how to reach them according to what the joint tourism agencies offer in this application, and on this basis Anyone can request for free the services offered by the Oued Kniss Travel app, which is a platform where large numbers of Algerian tourism agencies meet and propose their offers directly to the tourist.

V.5. Algeria Travel & Explore application:

This application has been released in 7 January 2019 by Edutainment Ventures making games company with a version 1.0.4, it includes a Guide with features and images which are available offline. This App is for the globetrotters who go by the quote, "All journeys have secret destinations of which the traveler is unaware". With Algeria Tourist Guide, the tourist can unveil the veiled places, connect with plethora of people, understand culture, art and history, Speak with natives in their language, relish the authentic food and take delight in the festivities (www.edutainmentventures.com,2020).

Apart from this, Algeria Travel & Explore guides the tourist when and how to visit various places in Algeria with precise location on the detailed Map. There are three ways to explore this application: Category view, City view and EduBank favorite places view. Pin your destinations and get the routes on the Map. Not only this, you can see exactly how the places look like with Street View integrated in this app. The app also has a feature to Rate and write Review/Experience regarding entity through Login. Your Travel experience and rating will help the user community. From the advantages of this application is that it works offline no internet connection needed to explore, in addition to the presence of information about airways, roadways, railways and waterways for a hassle free travel and a phrasebook to learn the basic Arabic phrases is available.

V.6. Algeria Guide application:

Algeria Guide is an Android application developed in 22 November 2013 to offer tourists mainly and Algerians in general, Practical Information on (https://www.android-dz.com/, 2020):

- Presentation of Algeria (Welcome to Algeria).
- Natural Reserves and National Parks.
- Algerian Sites Listed as UNESCO Cultural Heritage.

- Practical information concerning the 48 regions of Algeria mainly: telephone numbers and fax numbers, websites and e-mail of the tourist directions, area and plans, the indexes of the main natural, historical and cultural sites.

VI- Discussion and Conclusion:

Through this research, we have tried to identify the importance of smart tourism and the applications and its role in promoting the most prominent tourist destinations in Algeria, which is a primary source in attracting foreign tourists and thus the development of Algerian incomes outside of hydrocarbons, it can be said that the number of these applications is very few compared to the rest of the countries and the development that occurred in this field, especially with the lack of highlighting the importance of the resources and interest in promoting its offer factors to attract foreign tourists, who numbered for the season 2017 about 10 thousand tourists, according to the statements of the Minister of Tourism and Traditional Industries, and among the most important obstacles to activate smart tourism applications in Algeria the following:

- Lack of awareness among workers in this sector on one hand and individuals on the other for the need to take advantage of smart device applications in order to promote the attractions in their country, as Algeria is a continent on its one with unique resources.
- Weak network readiness index, which is the main variable that measures the degree of use of information and communication technology in the tourism field, as Algeria ranked 130 out of 136 countries, which greatly impedes the widespread use of smart applications to develop tourism.
- Poor infrastructure related to technologies that contribute directly to the sector's returns, smart application pages have become a logical alternative to the traditional marketing of tourist trips and this has contributed to achieving the tourist's desires and satisfying his basic needs, through the possibility of making many comparisons between different tourist sites and choosing the most appropriate ones without moving from one place to another.
- Weak in institutional and organizational framework, legislative structure in the field of electronic commerce, progress in the structure of information technology, and finally the cultural structure that helps society and people accept the idea of smart tourism in its entirety.

Based on the above, we suggest the following recommendations:

- The necessity of moving towards smart tourism because it largely reflects intelligence in services, business, projects, administration, governmental and non-governmental institutions. This helps in improving the efficiency of places in attracting larger numbers of tourists that meet their demands, and highlight the country's tourism potential, and become

competitive, and helps decision-makers to make smart decisions and smart planning, which leads to encourage investment and tourism sustainability in this area.

- Work to share actual applications and work to develop copies and publish them at an international level to introduce the Algerian tourism product, and focus on promoting desert tourism in particular because it is the most prominent resource that must be introduced.

- Seek to activate e-commerce in the tourism field, especially through the use of the Internet to facilitate the procedures of reservations and purchases of the various elements of the tourism product.

- Directing the media and advertising to serve the tourism sector and expand its scope to make Algeria a popular tourist destination, using the tourist attractions that are special.

- Encourage and finance Algerian youth interested in developing smart applications in the tourism field.

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