



**Using Digital Heritage Interpretation for Tourists with Special Needs
A Case Study on: Saqqara Complex in Egypt**

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Abstract

As technology plays a vital role in giving the past a future, it also helps in making the stories of heritage sites more accessible, especially for tourists with special needs. However, tourism destinations face various challenges in the implementation of new interpretation technologies, Egypt is still in the early stages of development. The current paper aims at developing new interpretation technologies with particular focus on tourists with special needs. It was concluded that the Egyptian authorities should be more concerned with tourists with special needs and provide them with all services and facilities to meet their needs. It was also noted that Egyptian heritage sites require great efforts to establish a digital environment to attract tourists with special needs.

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Key Words :Saqqara Complex- Digital Interpretation – Tourists with Special Needs –Heritage Sites.

Citation: El-Sayed R. M. M. Youssef A. M. and Abd El-Kafy H. J., (2016), Using Digital Heritage Interpretation for Tourists with Special Needs A Case Study on: Saqqara Complex in Egypt, No.23.-2(3) 35 – 54.



Introduction

Developing new technologies for cultural heritage interpretation is considered a global trend recently. Many important techniques are currently under development, which can come in many different ways (*i.e.* information panels, interactive computers, reverse engineering, terrestrial scanning, geo-physics, photo grammetry, GIS (Geographic Information Systems), e-publication, 3D digital imaging, visualization and web resources) (Economou, 2015) and this could be useful to enhance the experience of tourists with special needs.

As technology develops and smart-phones become increasingly prevalent, exciting ways of delivering stories and information direct to tourists' mobile phones are set to become the future in the world of interpretation. There is an urgent need to develop such techniques for efficiently interpret Egyptian cultural heritage sites for tourists with special needs.

There is a lack of facilities for tourists with special needs in most of the tourist areas and heritage sites in Egypt. It is a shame that, till our present time, only traditional methods (*e.g.* tour guides) are used to explain and interpret most heritage sites in Egypt.

The aim of this paper is contributing to the conservation of Saqqara Complex in Egypt by using digital technologies in order to enhance the experience of tourists with special needs, as well as proposing digital interpretation techniques suitable for Saqqara Complex to improve the understanding and enjoyment for tourists with special needs, and finally making heritage accessible by using facilities which enable more people with special needs to enjoy their visit include appropriate seating, signage, interpretive information and sanitary conveniences. These can be provided in special locations and adopt specific designs which do not disturb the special character of the site.

In an attempt to achieve the afore-mentioned aims, a case study is chosen as the methodology in this study. Since the researchers are based in Egypt it was decided to take Saqqara Complex in Cairo as a case study. The case study approach helps to understand the particular and unique



feature of the case. A data collection strategy was developed which focus upon the use of content analysis and structured in-depth interviews with general managers of Egyptian tourists companies specialized in providing accessible tours for tourists with special needs.

2- Digital Heritage Interpretation: A Theoretical Background

2.1- Interpretation: Definitions and Principles

Interpretation is explaining the value of a certain place through “print or electronic publications, public lectures, on-site and directly related off-site installations, educational programs, community activities, and ongoing research, training, and evaluation of the process itself” (ICOMOS, 2008). It is also the process that aims to communicate ideas and feelings that help enrich people’s understanding and appreciation of their history and heritage (Cater, et. al., 2015). It may be seen as “the art of enhancing understanding of the nature of cultural and natural heritage, for audience that visits a certain place during leisure time” (INTEPA, 2010). It is the art of helping people to understand and appreciate world heritage (Georganteli & Koukouni, 2015). It is a learning activity which communicates interests, values, significance, stories and ideas of a certain place to tourists (Heritage Lottery Fund, 2013). As well as it is the way heritage sites are presented and communicated to their visitors and the way those visitors engaged and interacted with heritage (Staiff, 2016).

Central to the characteristics of interpretation can be detailed as: Successful interpretation should be personal to the audience; it must do more than present fact; it is an art, which combines many arts; it should stimulate people into a form of action; it should present a whole rather than a part (Henson, 2014); it should explain the relationships between things and interpretation addressed to tourists with special needs should not be a dilution of the presentation to people not suffering from disabilities, but it should follow a different approach. Tourists with special needs have different needs and require different interpretive programs (Tilden, 1977). Accordingly, these characteristics are based around trying to place people at the heart of heritage interpretation. Heritage



interpretation links between visitors of heritage sites and people whose lives are represented by that heritage (Henson, 2014).

Accordingly, interpretation should be: An effective managerial tool; addressed to the general public (including tourists with special needs); considering the recreational context of the tourists (holidays, free days, etc.); inspiring, motivating and provocative; stimulating the use of the senses; suggestive and persuasive; encouraging active participation; giving a clear and concise message; revealing meanings and connections; contributing to public awareness and keeping heritage conservation (INTEPA, 2010).

Generally speaking, interpretation has different principles can be presented as: Interpretation programs should facilitate physical and intellectual access by the public to heritage sites; it should be based on evidence gathered through accepted scientific methods as well as from living cultural traditions; the interpretation of cultural heritage sites should relate to their social, cultural, historical, and natural contexts and settings (ICOMOS, 2008). Cultural heritage interpretation must respect the basic tenets of authenticity; the interpretation plan for a heritage site must be sensitive to its natural and cultural environment; it must be the result of a unanimous agreement between heritage professionals, host and associated communities, and other stakeholders. Continuing research, training, and evaluation are essential components of the interpretation of a heritage site (Keitumetse, 2016).

2.2- Reasons for Interpreting Heritage Assets:

Heritage sites are relevant to many people; they are part of their lives and they convey many different things to many different people. Each heritage site “speaks in a language that the average visitor cannot comprehend” (Tilden, 1968), thus the reason of interpretation is to: help tourists understand the meanings of these valuable sites, offer opportunities to discover a wider understanding, see heritage sites with new eyes, reveal the meanings a heritage site represents, and facilitate valuable experiences for tourists (Bacher, et. al., 2007). As well as it helps tourists to explore the importance of heritage sites and understand their



significance. It is also about bringing the past to life; it sheds light on the present and gives meaning to the past; it links present and future generations to the stories of past generations; it is a communication process that makes the experience of 'being there' richer and more relevant. Excellent interpretation can enhance tourists' satisfaction and build more memorable experiences as tourists find new meanings in heritage sites they enjoy. It makes tourists of all genres understand the value of those heritage sites as without interpretation much of this would be invisible (Mckercher & Du Cros, 2012). It "promotes enriched experiences that turn to magic, where everything comes together, where there is unencumbered delight in knowledge and experience, a greater joy in living, a better understanding of a precious place in the overall scheme, a positive hope for the future" (Beck and Cable, 1998, p. 3). Accordingly, reasons for interpreting heritage assets can be summarized as follows: Helping tourists to know more about heritage sites; enhancing tourists' enjoyment of a place; involving local people in presenting their heritage to tourists; making tourists behave in a responsible way and encouraging return visits and word-of-mouth promotion (Heritage Lottery Fund, 2013).

2.3- Using Digital Technology in Heritage Interpretation:

Digital technology is considered an important tool for heritage interpretation that can also help support preservation issues. It enables unique opportunities for enhancing tourists' experiences especially tourists with special needs. Tourists want more tailor-made experiences that meet their interests. For example, by using an interactive Smartphone app tourist can imagine how a building or a site looked hundreds of years ago as well as users can share their experiences via social media that are linked to the App thus enhancing the storytelling by their own stories (Cappellini, 2015); Putting historical documents on the internet allows thousands of people to read them from their own computers; and using a webcam allows recording video of heritage in a remote location. Accordingly, digital technology can be used in heritage interpretation, documentation and preservation in different ways as follows: Digitizing and making heritage assets available (e.g. archives, films, sound recordings or images); collecting data (e.g. about habitats, species, buildings or sites);



giving a heritage experience off-site (e.g. virtual exhibitions, crowd-sourcing, mobile apps, social media); and publicizing a project and its activity (e.g. through a web site and social media) (Heritage Lottery Fund, Using digital technology in heritage projects, 2012).

Digital technology has made our world smaller, making distant heritage sites more accessible than ever, it helps people to engage with heritage through: Web sites, digital images, online exhibitions or a Smartphone app etc. (Economou, 2015). Digital technology contributes also towards conserving human heritage for future generations by making digital copies. Examples include the digitization of film or video archives or the 3D laser scanning of vulnerable buildings or fragile objects. They help people to understand heritage. Examples include the audio guide, the interactive information kiosk which shows a visualization of how a site once looked, or an app which uses the power of Smart phones to give a visitor location specific information. (Heritage Lottery Fund, Using digital technology in heritage projects, 2012).

2.4- The Benefits of Using Digital Technology in Heritage Interpretation

Digital technology can provide new methods of heritage interpretation, to meet the needs of all types of heritage tourists especially those with special needs. It can enable an amplified experience of heritage; enriching human sensory perception and providing a high level of audience involvement; as well as attract and engage new types of audiences with heritage (i.e. tourists with special needs) (Lupo, et. al., 2016); also they could extend a 'physical world' experience and they enable tourists with special needs to learn in ways and settings that suit them. (Heritage Lottery Fund, Using digital technology in heritage projects, 2012).

3- Improving the Experience of Tourists with Special Needs at Heritage Sites

3.1- The Concept of Disability:

The term disability refers to physical or mental conditions with either long term or short term effects and this includes visible and invisible conditions



(Tran, 2015). The term 'impairment' is considered intrinsically linked to the conceptual nature of disability (Pearn, 2010). The term disability encompasses mobility problems; visual impairments; hearing impairments; speech impairments; and often hidden impairments such as: dyslexia; mental health problems; and conditions such as diabetes and epilepsy (Bauman & Shaw, 2016). Concerning persons with disabilities; they include those who have long-term physical, mental, intellectual or sensory impairments also other persons could be included in this group due to problems in accessing tourism products and services and they are: persons with temporary disabilities, persons with crutches during a temporary period and the elderly (Heritage Lottery Fund, Making your project accessible for disabled people, 2012).

3.2- Specifications of Tourists with Special Needs:

The term tourists with special needs refers to any person whose full and effective participation in society on an equal basis with others in travel, accommodation and other tourism services is hindered by the barriers in the destination they are in and by attitudinal barriers.

Under the Equality Act 2010 it is unlawful for entities responsible for carrying out and promoting cultural activities (including organizations managing heritage sites open to the public) to treat persons with special needs less favorably. Accordingly, they have to make 'reasonable adjustments' to the way they deliver their services so that persons with special needs can use them. Which means providing interpretation in a way that considers the requirements of persons with special needs, for example: Providing translation and sub-titles on video presentations for people who are hearing impaired; Providing large-print versions of labels for people who are visually impaired; and providing disability awareness training courses for all staff and volunteers who have contact with tourists with special needs. Interpretation for people with intellectual, sensory and physical disabilities should not be separated from the interpretation scheme or presented as special program, which can lead to the stigmatization of tourists with special needs. It is expected providing interpretation that is accessible to all; designing places and their



interpretation to be more usable by many persons (Heritage Lottery Fund, Interpretation, 2013).

Service providers in a region or a destination should take all appropriate measures to ensure that tourists with disabilities: Would have access to materials and cultural activities in accessible formats. Can participate, develop and utilize their creative, artistic and intellectual potential, not only for their own benefit but also for the enrichment of society (UNWTO, 2013).

3.3- Making Heritage Accessible

According to the World Health Organization (2011) there are approximately one billion persons with disabilities in the world. This equates to approximately 15% of the world population having a physical, mental or sensory disability (WHO, 2011). For these millions of persons to be able to participate in tourism on equal terms, it is crucial that destinations develop universal accessibility measures. Those destinations that create environments, products and services suitable for all will enhance their supply, enable a better tourist experience and improve the quality of life of local citizens and tourists (UNWTO, 2016).

With the ratification of the United Nations Convention on the Rights of Persons with Disabilities, there has been an increased focus on the tourism sector's obligations to ensure that people with disabilities can exercise their right to enjoy leisure, sport and tourism under the same conditions as other people. The States Parties to the Convention must lead the way to guide the public and private sectors to make tourism accessible to all citizens.

According to the World Tourism Organization, people with disabilities have equal rights to get tourism services and opportunities such as: independent travel, accessible facilities, trained staff, reliable information and inclusive marketing. The growing demand for accessible tourism would be now seen as an opportunity rather than an obligation as well as it would help maintaining and developing quality, sustainability and competitiveness at tourist destinations. As more individuals enjoy the



opportunity to travel, the tourism industry gets more tourists, longer seasons and new incomes. Society as a whole would benefit from new job opportunities, more tax revenue and an accessible environment for both inhabitants and tourists (UNWTO, 2013).

Accordingly, making Egyptian heritage accessible is not only about providing access to tourists with disabilities, but also it creates universally designed environments for persons that may have temporary disabilities, families with children and elderly people (Buhalis, et al., 2012). The information provided should take into consideration the needs of tourists who are deaf or blind. Therefore interpreting heritage should be provided in both written and audio format (UNWTO, 2013).

4- The Significance of Saqqara Complex in Egypt

4.1-Location

Saqqara is located at the Nile Valley near the ancient city of Memphis, fifteen miles southwest of Cairo, just west of the modern village of Saqqara (Berney & Ring, 2013).

4.2- Site's Description

Saqqara is indeed an impressive heritage site. It is the location of the earliest pyramid known to mankind. This was a transformation of the earlier tombs, shaped like great brick rectangles, with the walls sloping inward and a flat roof, commonly referred to as *mastabas*. For the first time brick was replaced by stone (Rigano, 2014). The Step Pyramid dates back to circa. 3200 BC and it is considered the first attempt by the ancient Egyptians to build a pyramid as an eternal abode for the soul of the great pharaoh Zoser, founder of the 3rd ancient Egyptian dynasty (Gates, 2003). The ingenious engineer, physician and architect, Imhotep, was seeking a way to immortalize his master so he invented the art of building in stone, thus creating the first limestone funerary complex surrounding the tomb of Zoser i.e. the Step Pyramid. It is an area of a wealth of monuments that is definitely worth visiting (Thanjan, 2010).



5- Research Methodology:

A structured questionnaire form was designed and used in conducting in-depth interviews with general managers of Egyptian tourists companies specialized in providing accessible tours for tourists with special needs; which are: Egypt for All, All Tours Egypt, Egypt Last Minute, Wings Tours and Memphis Tours.

6- Results and Discussion:

In-depth Interview Analysis:

Part one: The experience of tourists with special needs in Egypt

1- Categories of disability

Table (1): Disabilities of tourists*

Disabilities	Frequency	Percentage
Using wheelchair	5	100%
Blind	1	20%
Deaf	1	20%

* More than one answer is valid

The previous table illustrates that (100%) of the sample providing tourist programs for tourists using wheelchair, while (20%) of the sample providing tourist programs for blind tourists and finally tourist programs for deaf tourists provided by (20%) of the sample.

2- Hotels with accessible rooms

It is resulted from the field study that some hotels in Cairo have elevators and rooms that are spacious enough to accommodate a wheelchair, but the rooms may not have wide or automatic doors that open outwards. Most of the five star hotels are recommended for their consistency of wheelchair facilities. The hotels listed below have good accessibility and facilities for wheelchair users:



Table (2): Hotels with accessibility for wheelchair users

Hotel	City	No. of accessible rooms	Wide doors
Conrad	Cairo	4 Rooms	Available
Grand Hyatt	Cairo	7Rooms	Available
Hilton	Cairo	2 Rooms	Available
Ramses Hilton	Cairo	2 Rooms	Available
Le Meridien Pyramids	Cairo	3 Rooms	Available
Le Meridien Heliopolis	Cairo	6 Rooms	Available
Sheraton Heliopolis	Cairo	5 Rooms	Available
Zoser	Cairo	3 Rooms	Available
Intercontinental	Hurghada	3 Rooms	Available
Rihana	Gouna	5 Rooms	Available
Grand Hyatt	Sharm	5 Rooms	Available
Crown Plaza	Sharm	2 Rooms	Available
Basma	Aswan	2 Rooms	Available
Sheraton	Luxor	1 Room	Available
Hilton	Luxor	1 Room	Available

3- Accessible tourist sites in Egypt

According to the responses, it has been concluded that, there are several accessible tourist sites in Egypt can be detailed as follows:

a- The Pyramids of Giza can be toured outside on wheelchairs as well as the nearby Solar Boat museum, has been designed to be more accessible with ramps. Also, the Sound and Light show at the Pyramids has a special area in the front for wheelchair users.

b- The Egyptian Museum has ramps at the entrance, an elevator to the first floor and wide doors to the most of the exhibit areas.

c- There is a wheelchair access along most of the cobblestone alleys of Khan El-Khalili bazaars.

d- St. George church and the Coptic Museum in Coptic Cairo are partly accessible.

e- Cairo Tower has provided access for people with disabilities as well as there is an elevator to the glass restaurant.



f- Amarco I, is the only Nile cruise ship sailing between Luxor and Aswan, that has accessible cabins and facilities on board.

g- In Alexandria, the Bibliotheca Alexandrina is completely accessible. There are Braille signs everywhere.

h- In the Greco-Roman Museum, many of the displays are located on the ground level.

4- Accessible cars and tools used during the tour

It is apparent that vans with wheelchairs lifts and electric ramps are non-existent, because of the prohibitive costs of importing specialized accessible coaches in Egypt. Accordingly, most accessible tour companies have vans modified in a workshop by removing seats, attaching clamps for securing wheelchairs and adding portable ramps for getting in and out of the vehicle.

5- Government aids for tourists with special needs in Egypt

The findings of the interviews shed light on the initiatives taken by the Egyptian government to assist those with special needs. For example: there is a separate counter for the elderly and disabled at Passport Control in Cairo airports arrival halls. The new terminal at the airport has all accessibility features such as ramps, accessible restrooms, audible and visual signage. Also, curb cuts are provided for easy access to cars and buses.

Part two :Requirements of tourists with special needs at Saqqara Complex

6- Medical units at the area

Table (3): Availability of medical units at the area

Medical units	Frequency	Percentage
Yes	5	100%
No	-	-
Total	5	100%



From the previous table it is apparent that there is a medical unit at Saqqara Complex but it need to be more advanced as it is not well qualified.

7- Signs and maps

Table (4): Sufficient number of Signs and maps at the area

Signs and maps	Frequency	Percentage
Yes	-	-
No	5	100%
Total	5	100%

It is resulted from the field study that the number of signs and maps at Saqqara Complex is insufficient.

8- Entrance of Imhotep museum at Saqqara Complex

Table (5): The entrance has a wide door

Signs and maps	Frequency	Percentage
Yes	5	100%
No	-	-
Total	5	100%

According to the responses, the entrance of Imhotep museum is wide enough to accommodate a wheelchair; also there is a ramp to enter the museum.

9- Difficulties and challenges at Saqqara Complex

Table (6): Difficulties face tourists with special needs at Saqqara Complex*

Difficulties	Frequency	Percentage
Roads	5	100%
Ramps	5	100%
Stairs	5	100%
Bathrooms	5	100%
Parking areas	5	100%

* More than one answer is valid



According to the findings, there are many difficulties facing tourists with special needs at Saqqara Complex represented as follows:

Saqqara Complex is less accessible area by wheelchair, there is a risk of getting stuck in the sand or finding a patch of stairs which is difficult for disabled tourists, also there is no accessible bathrooms for tourists with special needs, as well as there is no rolling access to the tombs in the area, finally, parking areas are far from the area and the tourists have to walk in the sand to reach the site with great efforts.

Part three :Using Digital Interpretation at Saqqara Complex

10- Uses of digital technologies at the area

Table (7): Availability of using digital technology at Saqqara Complex

Signs and maps	Frequency	Percentage
Available	1	20%
Not available	4	80%
Total	5	100%

The findings of the interviews shed light on the availability of using digital technology at Saqqara Complex. It would be detailed as follows: (80%) of the sample indicated that using digital technology at Saqqara Complex is not available at this area while (20%) of the sample mentioned that using digital technology at Saqqara Complex is available at Imhotep museum represented in screen, video tapes, head phones ...etc. but they need to be more modified.

11- Digital interpretation for tourists with special needs

Table (8): Suggested digital interpretation techniques at Saqqara Complex*

Digital interpretation methods	Frequency	Percentage
Mobile applications	4	80%
Mobile guide	4	80%
Digital kiosk	3	60%
Digital screens	5	100%
4D movies	5	100%

* More than one answer is valid



It is resulted from the field study that the suggested digital interpretation techniques at Saqqara Complex are: digital screens (100%), 4D movies (100%), mobile applications (80%), mobile guide (80%), and finally digital kiosk (60%).

12- Digital interpretation is not applied at Saqqara Complex

Table (9): Reasons for not applying digital interpretation at Saqqara Complex *

Digital interpretation methods	Frequency	Percentage
Awareness	4	80%
cost	5	100%
Qualified staff	4	80%
Routine	4	80%
Poor planning and management of Saqqara Complex	5	100%

* More than one answer is valid

It is apparent that there are many reasons for not applying digital interpretation at Saqqara Complex. (100%) of the sample mentioned that the high cost for applying digital interpretation as well as poor planning and management of Saqqara Complex formed the biggest challenge that had to be overcome, (80%) of the sample think that the lack of awareness of digital interpretation, insufficient number of qualified staff and using traditional methods could be a possible cause.

7- Conclusion

Despite the work that is being done to improve the travel conditions for disabled travelers in Egyptian heritage sites, it has been revealed that different challenges are facing tourists with special needs in Egypt especially at heritage sites such as: Tourists with special needs may find difficulty to get around the archaeological sites, due to narrow passageways, and steep uneven stairs. The lack of hotel rooms equipped for tourists with special needs, which are often concentrated in five-star hotels. Upon reservation, tourists shall inform the hotel's administration about their needs and expectations. There are no bathrooms for the disabled only at airports. Officials in historic areas refuse the entry of



tourists' disabled vehicles to go down in the nearest place. There are a few numbers of tourist companies, restaurants and rest houses that provide services, tours and special transportation for the physically disabled tourists. Well-trained professionals provide the support and equipment needed. Awareness of this type of tourism is very limited. Insufficient number of qualified staff able to deal with tourists with special needs. There is only one tourist company in Egypt providing publicised annual packages tailored to deaf and blind tourists. There is only one Nile Cruise Ship sailing between Luxor and Aswan which is equipped for physically unable tourists.

8- Recommendations

Based on the results achieved, some suggested recommendations to enhance the experience of tourists with special needs in Egypt especially at Saqqara Complex, are illustrated as following:

8-1-Ethical considerations

- The needs of disabled tourists must be taken into consideration when planning the development of heritage sites (e.g. ramps, toilets...etc.).
- Egyptian heritage sites should be designed, after consulting persons with disability, to be as accessible as possible in order to meet the different needs of those with access requirements.
- Concerning mobility impaired, the tourist areas should be accessible by wheelchairs as well as accessible toilets should be found.
- Concerning visually impaired, audio descriptive tour should be available as well as large print guides, orientation leaflets and tactile objects.
- Concerning hearing impaired, transcripts of audio tours should be available and compatible with many hearing aids.
- Providing training courses for tour guides on the use of sign language.

8-2-Digital technologies

- Using digital technology in the interpretation of heritage in Saqqara Complex, especially for tourists with special needs (i.e. mobile units which provide a multi-sensory experience of heritage sites and



interpretation with headsets and tactile images, audiovisual equipment, digital screens in front of inaccessible sites, etc...)

8-3- Management and Visitor planning strategies (Saqqara Complex)

- Signage in Saqqara Complex should be written in more than one language, as well as in Braille.
- Digital screens can be placed in front of the tombs in Saqqara Complex, which is difficult to access for tourists with special needs.
- The visual setting hall in Imhotep Museum, in Saqqara Complex, has to be re-developed to suit the tourists with special needs such as placing large digital screens and allow audio recordings.
- Setting wood ramps in Saqqara Complex as not to distort the archaeological area with fixed ramps.
- Providing sidewalks with audio signals in addition to the normal signals.
- Allocating some bathrooms to serve handicapped.

8-4- Marketing strategies

- Spreading awareness among officials and the public about the importance of physically-challenged tourists as a huge potential market.
- Egypt must sign several agreements with some tourist countries to exchange the type of handicapped tourism.
- Listing tourist constructions, which are equipped with facilities for tourists with special needs in order to be included in the advertising materials.



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استخدام التكنولوجيا الرقمية في تفسير التراث للسائحين ذوي الاحتياجات الخاصة دراسة حالة: منطقة سقارة الأثرية

الملخص العربي:

تلعب التكنولوجيا الرقمية في الوقت الحالي دوراً كبيراً في تفسير التراث الثقافي فهي تعيد الحياة للماضي و تمكن من شرح و تفسير التراث الثقافي بطريقة سهلة و بسيطة خاصة لذوي الاحتياجات الخاصة، مما يساعد علي جعل الجولات السياحية لزائري المواقع التراثية أكثر متعة. و مع التطور التكنولوجي لا بد أن يتم تنمية و تطوير هذه التقنيات و الاستفادة منها في مواقع التراث الثقافي المصري، حيث تعاني منطقة سقارة الأثرية محل الدراسة، من القصور في التسهيلات و الخدمات الخاصة بالسائحين ذوي الاحتياجات الخاصة و حتي الآن يتم الإعتماد علي الطرق التقليدية في شرح المواقع الأثرية المصرية (المرشد السياحي). و يهدف البحث إلي توضيح أهمية استخدام التكنولوجيا الرقمية في تفسير التراث الثقافي بطريقة مشوقة تثير التجربة السياحية و لقد خلصت الدراسة إلي أن منطقة سقارة الأثرية تعاني من قصور شديد في التسهيلات و الخدمات الخاصة بالسائحين ذوي الاحتياجات الخاصة و الإعتماد علي الطرق التقليدية في تفسير التراث .