

**Mobile App. and Museums, New approach of Heritage
interpretation**
**Case Study on the Current uses at Museum of Islamic Art in
Cairo**

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Abstract:

Mobile Applications performed in many different technologies, Mobile App. That is based on QR code is cheaper than the other App. And it suits museums and its contents. It includes information, photos, 3D model and other objects related to the museum's exhibition ⁽¹⁾.

Mobiles Applications are becoming better familiar by museums. As museums become more concerned to develop and use mobile apps, their utility and pervasiveness is starting to increase. Nowadays, mobile apps are used in museums for interpretation and education, to marketing and promoting the exhibition. According to a report from mobile manufacturer Ericsson, by 2015 80% of people accessing the Internet worldwide will be doing so from a mobile device. There are different devices that museum's visitors are able to use anywhere, so they can use it in the public places and galleries at museums. And museum's professionals supposed to use the creative applications of mobiles, with the advanced features of their applications, there is creative approaches for

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museums to extend the museum experience to other locations both within and beyond the gallery ⁽²⁾.

Keywords: # Mobile App, # QR code, # Interpretation & User experience.

المخلص

تنتشر تطبيقات الهاتف المحمول في مختلف التقنيات، وتعتبر التطبيقات التي تعتمد على تقنية (QR) من أكثر التطبيقات انتشارا نظرا لقلّة تكاليف انتاجها، وهي من أكثر التطبيقات التي يناسب استخدامها المتاحف ومحتوياتها. حيث ان التطبيقات يمكن ان تتضمن معلومات وصور ومجسمات ثلاثية الأبعاد وكذلك عناصر أخرى مرتبطة بالعرض المتحفي.

أصبح استخدام تطبيقات الهاتف المحمول مألوفًا داخل المتاحف، حيث ان المتاحف عنيت بتطور واستخدام تطبيقات الهاتف المحمول والتي تطور يوما بعد يوم، تستخدم المتاحف تطبيقات الهاتف المحمول في التفسير والشرح والتعليم وكذلك في التسويق واثراء العرض المتحفي. طبقا لتقرير نشر سنة 2015 بواسطة (اريكسون) لصناعه الهواتف المحمولة ان 80% من مستخدمي شبكة الانترنت العالمية سوف يقومون باستخدام الشبكة عن طريق الهواتف المحمولة بدلا من أجهزة الكمبيوتر. هناك العديد من الأجهزة المحمولة التي يمكن لزوار المتاحف ان يستخدموها في أي مكان، كذلك يمكنهم استخدامها في الأماكن العامة وداخل قاعات العرض المتحفي. ويفترض بالمتخصصين في المتاحف استخدام تطبيقات خلاقة للهواتف

المحمولة ذات خصائص متقدمة، حيث لا يزال هناك العديد من الفرص لنشر العرض المتحفي خارج حدود المتحف بواسطة هذه التطبيقات. **مفاتيح الكلمات: # تطبيقات الهاتف المحمول، #الماسح الالكتروني، # التفسير وتجربة المستخدم.**

Museum of Islamic Art

Museum of Islamic Art is located in Bab al-Khalq in the heart of historic Cairo, is considered to be the largest Islamic art museum in the world, as it houses close to a hundred thousand artifacts of various types collected from India, china, Iran, all the way to the Arabian Peninsula, the Levant, Egypt, North Africa and Andalusia. Its collection is characterized by its breadth of coverage of all the branches of Islamic art throughout the ages, which makes it a beacon of Islamic art and civilization for all times.

The importance of the museum of Islamic art also stems from its being the greatest institute of learning in the world which caters to the fields of Islamic antiquities and Islamic art in general, due to the versatility of its collection, which spans a broad gamut of raw materials such as metals, moldings, wood carvings, as well as ivory, ceramic, stone and carpet, among others.

In the year 1869, the idea of establishing a museum for Islamic arts and antiquities first came up during the rule of Khedive Ismail. This was achieved during the rule of Khedive Tawfiq, his son. In the year 1880, when Frantz Pasha collected antiquities and artifacts of the Islamic period in the eastern wing of al-Hakem Bi Amr Allah's Mosque. In 1903, a small building was erected in the courtyard and was named the Arab Museum with Frantz Pasha as its director. Upon his retirement.

On 28th December, 1903, the current building in Bab al Khalq Square officially opened by Khedive Abbas Helmy

2nd. In the year 1951, the name has been changed from House of Arab Antiquities to the museum of Islamic art; the artifacts were displayed in 23 halls classified on the basis of their historical period and the material they were made of. Between 1983 and 1984 the museum passed by an important period of expansion that saw the annexation of the piece of land adjacent to the museum that was previously occupied by a gas station. The two extra halls were used to house the museum's textiles and carpets collection besides an internal storage area on the top floor, and a section for numismatics on the bottom one. The annexed plot of land was turned into a museum garden and a cafeteria.

A new phase of comprehensive development was undertaken in 2003 which involved the construction of a new administrative building rising three stories high to house the staff offices, a library, a restoration department and a lecture hall. The display layout was completely modified. In 2010, Museum have been opened and started to receive many visits.

In 2014, it took a whole year, until the beginning of 2015, before serious steps were taken to bring the museum to its original state before the explosion. This was made possible thanks to the generous grants and donation offered by such reputable entities such as the United Arab Emirates, the UNESCO. ARCE, the Swiss government, and the Italian government. This led to the complete revision of the display layout ⁽³⁾.

Mobile App. For Museum Education and Interpretation

Mobile devices have varieties of technologies, such as, GPS and compasses which allows users to sophisticate location and positioning, motion sensors give users' a new form of control and interaction. In addition to the other features of technologies, Mobile App. Makes all of them available within the museums ⁽⁴⁾.

Museums used to deal with Mobile Apps for two main purposes: to supply users with information relate to the museum and exhibition, such as Musée du Louvre's free iPhone app which is an app contains detailed information about the museum's exhibition (go. nmc.org/gddts). Mobile app could be used as a mobile guide through the collection or gallery space. Mobile apps are increasable developed, and their utility is rapidly developed too, and it used for further purpose such as:

- **Exhibits and Collections.** Museums are trying to explore mobile's features to establish and recognize the identity of visitors and provide location-based services that meet the needs of visitors, such as allowing them access to additional content, or simple tasks such as making payments or finding their way to an exhibit, etc...
- **Marketing and Communications.** Mobile apps became an increasingly useful tactic to promote new collections for the museum. They offer more interactive approaches to drive interest in current

and prospective patrons, and ultimately, more traffic to their physical spaces ⁽⁵⁾.

Mobile App. of the Museum of Islamic Art.

Basic information about the application.

This application gives a simple idea about the museum history, the collections, news, workshops and more.

Developer: E-MOTION PROMOTIONAL SOLUTIONS

Category: Education

Updated: June 24, 2016

Version: 1.0.4

Size: 32.7 MB.

Rating: Rated 4+

Family Sharing: Yes

Compatibility: Requires IOS 6.0 or later. Compatible with iPhone, I pad, and iPod touch.

Language: English.

The mobile app is available on the App. store for free.

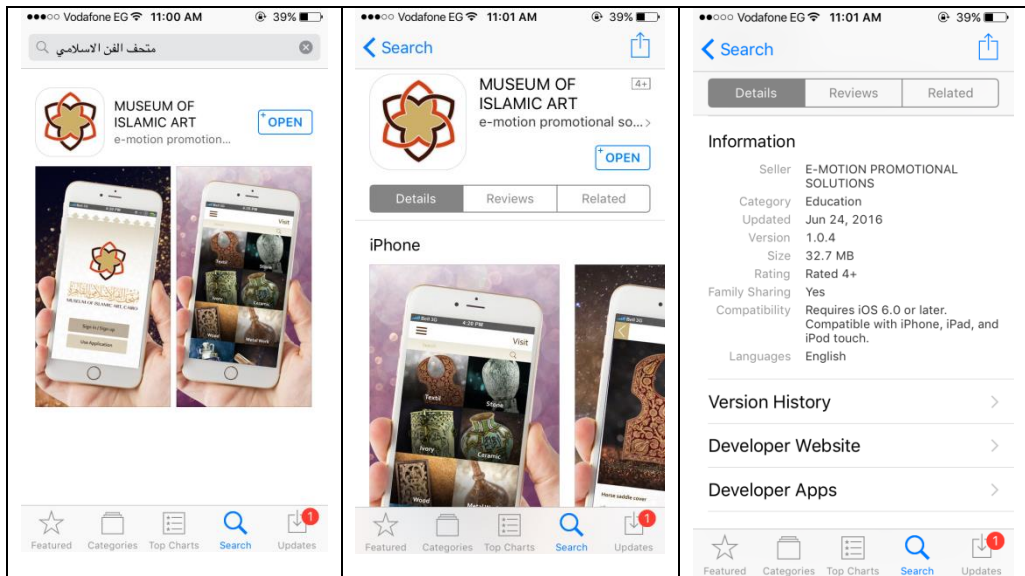


Figure 8: Mobile Application of virtual museum of Islamic Art. Note, taken by the researcher

Functions of the mobile app of the Museum of Islamic Art.

The user interface of the mobile app offers users many useful functions and utilities in both Arabic and English languages.

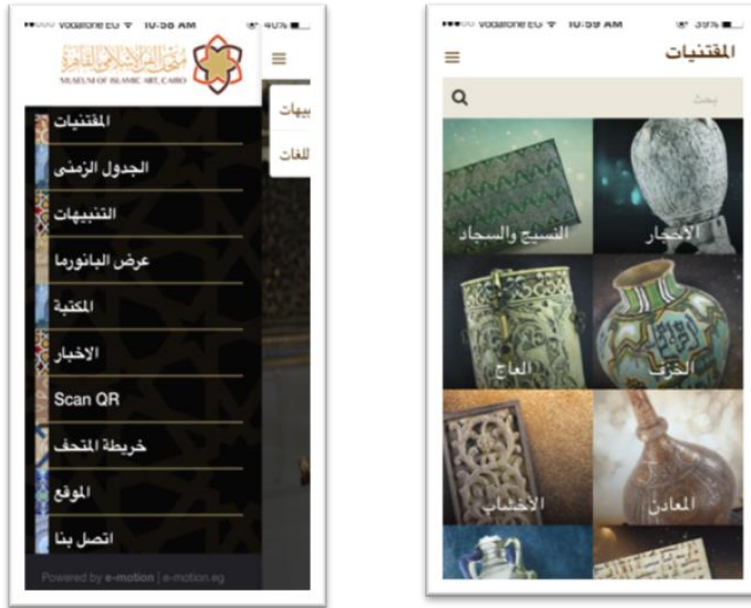


Figure 1: User interface of the Mobile Application. Note, taken by the researcher

All the functions and utilities of the application are in both Arabic and English language, which is very easy to switch between both of them. Functions of the application have been tested by the researcher and volunteers inside and outside the museum of Islamic Arts. These functions, as follows: -

Collections: function shows the collections which are in exhibition and give detailed information and pictures for the object, such as description, origin, and its location at the exhibition hall.

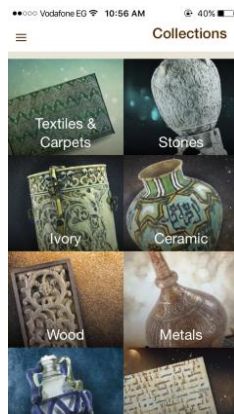


Figure 2: Virtual Collections of the Museum. Note, taken by the researcher

Timeline: it shows the history of the museum, and its development over the time since the beginning of the establishment idea up till now.

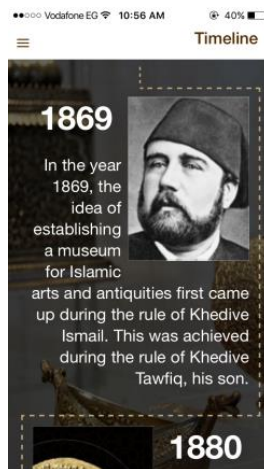
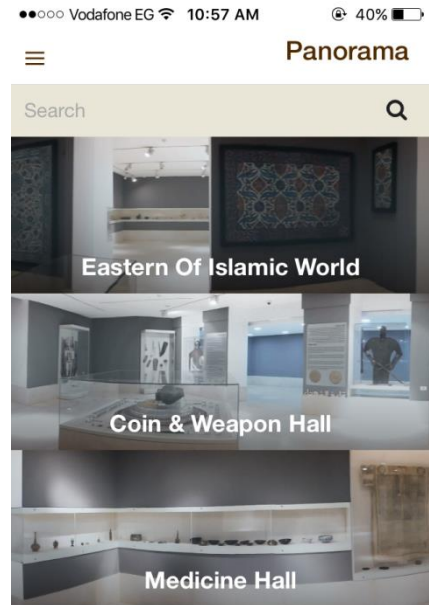


Figure 3: Historical background of the Museum. Note, taken by the researcher

Notifications: shows any new notifications related to the museum.

Panorama: show panoramic view to the different halls and sections of the museum and its contents in 360°.

Figure 4: Virtual contents of the museum. Note, taken by the researcher



Library: this function allows the user to access online both of the Museum scientific magazine, and the library of the museum in order to use the digital books.

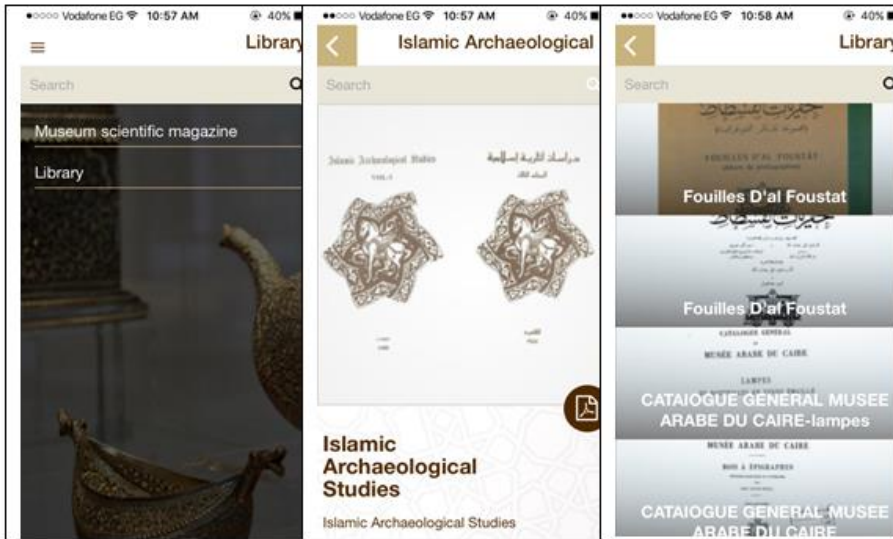


Figure 12: The Virtual Library. Note, taken by the researcher

News: this shows the news and events of the museum, which makes user up-to-date with the museum.

Figure 5: Oline News. Note, taken by the researcher



Scan QR: very important function allows user to use QR scanning to read all detailed information and see pictures of the objects.

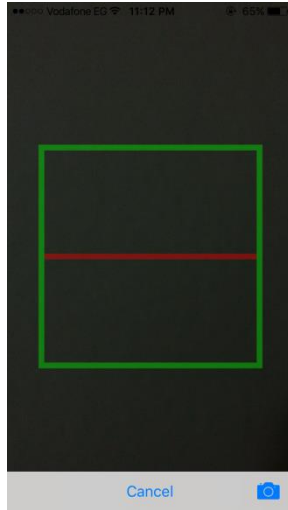


Figure 6: QR Tool. Note, taken by the researcher

Maps: this utility gives the user maps of the main building of the museum, and maps of the galleries and their numbers.

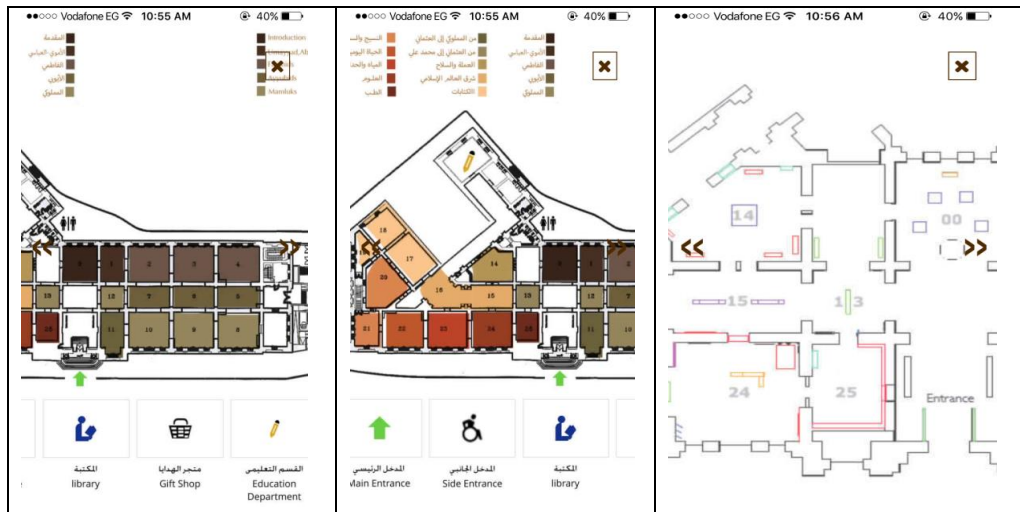


Figure 7: Maps of the Museum. Note, taken by the researcher

Location: it is function use GPS in order to identify the user's location, and drive user to the museum's location.

Contact: this utility allows users to contact the museum's staff via e-mail. And also give the user all contact's detail of the museum, and timing of the exhibition and visiting.

Figure 8: GPS tool. Note, taken by the researcher 26th of March 2019



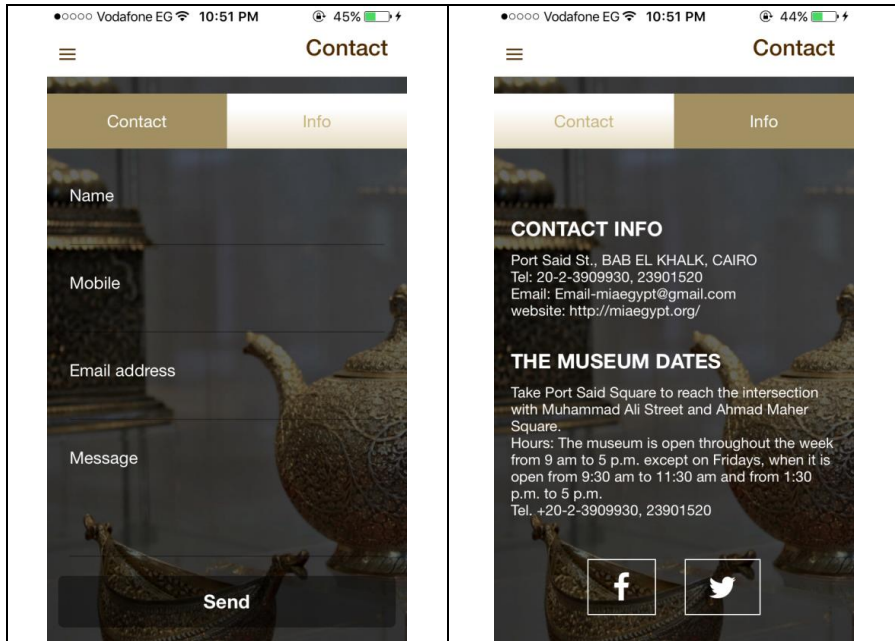
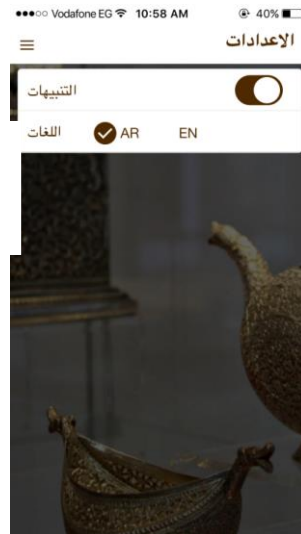


Figure 9: Contact INFO. Of The Museum of Islamic Art. Note, taken by the researcher

Setting: it allows user to choose between both of Arabic or English language, while the user uses the application.

Figure 18: Contact INFO. Of The Museum of Islamic Art. Note, taken by the researcher



Conclusion

Heritage Interpretation is a dynamic operation communicate the visitors within the exhibition in different levels such as emotional and intellectual connection, in addition to the physical integration. This suppose to be taken in consideration during assessing visitor's experience using Mobile App.

The Mobile app survey have been resulted the strengths and weaknesses of apps according to the survey findings. The survey has done by the researcher in the museum, meetings and discussion have done with the visitors who experienced the Mobile App to find out how the Mobile App enhance the visitor's experience inside the museum.

- **Strengths**

According to the visitor's experience, the strengths of the Mobile apps in the museum are:

- 1. Enjoyment**

80% of participants show satisfaction when they used the App. And they enjoyed their app experience.

- 2. Easy and fast way to Finding information**

90% of participants said it was easy and fast to find and share information while using the app.

- 3. Engagement**

70% of participants agreed that they had an engaging experience when they used the mobile app during their visiting.

- **Weaknesses**

- 1. Technological problems**

65% of participants faced some Technological problems related to the internet connection and the device they use it.

- 2. Lack of updating**

30% of participants who used the App. Before mentioned that it has not being updating and they found no new information.

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