SELFIE AS A MOTIVATIONAL TOOL FOR CITY EXPLORATION

Mark Bugeja, Alexiei Dingli and Dylan Seychell
Department of Intelligent Systems, Faculty of ICT, University of Malta
University Campus, Tal-Qroqq, Msida, MSD 2080 Malta
+356 2340 2340

ABSTRACT

This study exploits the selfie phenomenon in order to develop an application that motivates city exploration and tourism to encourage greater mobility. The application uses a reward based system that rewards the user at specific target locations by allowing the user to take pictures and selfies at these landmarks only. This in turn encourages the user the visit more sites and unlock further content. Initially the research looks at evaluating whether taking a 'selfie' is sufficiently motivating for a user to be regarded as a reward. The survey results obtained show a strong correlation between photography, 'selfie' and travel. A number of users were then given a prototype of the application to use in Valletta the capital city of Malta. The users were then interviewed, the interviews established that users find such an approach for city exploration to be meaningful. Ultimately this means that through the application tourists are encouraged to explore more of the captivating sites found in the area.

KEYWORDS

Mobile Tourism, Travel Selfie, Tourism, Gamification, Mobile Learning

1. INTRODUCTION

Mobile tourism is not a new concept. With the rapid development of smartphones from industry giants such as Apple and Samsung most users nowadays have at their fingertips small powerful computers. These machines have already started to replace traditional day to day information goods such as newspapers and magazine. This paper aims to explore how the present use of smartphones combined with selfie culture can be channeled into a mobile tourist application.

Tourism can be defined as an activity in which a person/s travel from one place to another in order to consume leisurely or business activities that are available at the destination. Traditionally the word tourism and travel are intrinsically linked. In fact, most research based on tourism assumes that time and space are linked. Thus, for a tourist to consume any of the activities available in another place they would need to travel to that location first. With the advent advancement in technology the notion that tourism is always linked to some space is slowly being revaluated. With technologies such as smart phone, Virtual Reality and Augmented Reality time and space become relative to the 'tourist' using these products. In (Letellier, n.d.) the authors proposed using Virtual Reality applications that allow users to experience in high definition detail the location of Luang Prabang a world heritage site located in Lao People's Democratic Republic. The main motivation behind this study was to allow for conservation in areas where the sheer number of tourists travelling to that location over time could potentially deteriorate the quality of the physical structures and environment of the surrounding area. Moreover, with the use of this technology more access can be given to tourists that are physically impaired and cannot travel to such sites.

The first section of the paper establishes how selfies have replaced traditional tourist photography as well as introducing the concept of selfie tourism and how it all started through smartphones (Cody Morris Paris, 2015). This leads to the exploration of what we define as tourism how users traditionally approach travelling and how this is changing. Some current tourist applications are than discussed in order to establish trends. Finally, this section is tied down with the concept of goal based systems in order to motivate users by rewarding them through actions that they currently already do in their everyday life. Such systems increase

the success of a tourist mobile application as ultimately if a city is not explored than the application will not achieve its ultimate goal.

The second section introduces the profile of the users that the application is aimed for as well as discussing how this profile was obtained. It then goes into the methodology of the application and how it works by providing visual artefacts. From there we move on to the results obtained from interviewing users of this application what it means and what this will lead future research to.

2. BACKGROUND

2.1 Selfie Tourism

How is photography and the act of taking one's photo connected to tourism? In (Anja Dinhopl, 2016) the authors discuss the concept of touristic gaze or rather tourist looking. The act of looking at something is in itself is consumption. Tourists consume with their eyes what they see in front of them. "Consuming something becomes owning something" (Anja Dinhopl, 2016). This is apparent in the way tourists select places to capture and frame in order to produce digital albums of their trips. In the past years thanks to the introduction of front-facing cameras on smartphones and tablets a crucial design factor that attributed to the rise of the selfie culture. This allowed users to see themselves as they are capturing a photo (Anja Dinhopl, 2016) (Cody Morris Paris, 2015). Thanks to faster and wider coverage of wireless networks users can upload the selfie as soon as they take the photo (Cody Morris Paris, 2015), the increased use of graphics centred social networking sites to share selfies with your friends and the increase of instant messaging such as Whatsapp, selfies are becoming more and more popular. In fact, the word 'selfie' has become so popular in our everyday life, that in 2013, the word 'selfie' in itself was selected as the 'word of the year' and added to Oxford English Dictionary (Cody Morris Paris, 2015).

Selfie taking is a new way of touristic looking. The camera is not the vehicle used to frame or target a captivating destination. It has become an extension of oneself to redirect the importance of the object on the self. Portraits and self-photography is conceptually not new, but, new technology has enabled the ease of capturing photos in larger quantities. "Rather it acts as a mirror at which tourists look to take their pictures prior to, as well as when they are taking photos. Tourists are thus not looking through the screen at the destination, but at the screen to see themselves." (Anja Dinhopl, 2016)

Tourists are now looking at how to capture themselves in relation to where they are. This is emphasized by the fact that they are looking to share what they have just experienced with all the people they know. Thus, it has now become more about "Look, I am here!" rather than "This place is beautiful"

The selfie is now elevated as a touristic product and the tourist destination has become the background to set the scene for the consumption of said product. Given this new way of thinking possibilities lie in using this to produce products based on satisfying this act of consumption.

2.2 Digital Tourism

The evolution of mobile phones into fully functional computers opened a wide range of possibilities. In the previous section, we established that the innovative introduction of front face cameras adopted by smartphones introduced the selfie culture. One other emerging popular uses for these devices is in the tourism sector. Most studies in this area focus on how Smartphone's impact the touristic experience or how highly mobile travel has become. Travelling in itself is the act of planning, travelling and documenting (Craig-Smith, 1994) ICT tools play an integral part in all the stages involved in travelling. Smartphone enable interactions between the physical and the virtual world regardless of location. This is essential for most travelers as they can pre-plan the trip through virtual means and then use Smartphone's to physically interact with their environment during the travelling stage and finally document their whole experience on social media.

Smartphone use in travel is strongly associated with the everyday use of smartphones. Repeated use of something that users are familiar with influenced their use of smartphones for travel because this was consistent with their daily routines, habits, and a sense of attachment to friends or workplace (Dan Wang, 2014).

The need to access instant information is also a contributing factor to the rise of Smartphone use in travel. Users can now get information on the go and as such do not even need to pre-plan their trips as they can access that information once they are at the destination (Dylan Seychelle, 2012) (Tzu-how Chu, 2011).

An effective implementation of mobile tourism is to combine the need for instant information by using GIS technology to guide a tourist through a city or touristic landmark. These applications provide tourists with real-time information once they are at specific areas within their guided tours. This type of application is highly effective when used in heritage sites, cultural landscapes and natural areas. (Dylan Seychell, 2011) (Dan Wang, 2014)

Innovative use of mobile tourist application also introduces the concept of adding emerging technology such as virtual reality or augmented reality. Virtual Reality does not require users to be physically present at the tourist site this makes it ideal for use in marketing. Augmented reality on the other hand superimposes graphics on the camera view displayed on your smartphone. This technology can be cleverly used to provide information to users as they are moving through a city (Dylan Seychell, 2011).

2.3 Mobile Learning and Gamification

Traditionally learning is the process adopted by a person to comprehend and understand a subject or to gain the skill to perform a task. The process is mostly associated with a physical location to gain the knowledge, the use of a book or a teacher that would spread the knowledge to that person. Through mobile learning irrespective of the location and the person's ability, a person, is able to learn and obtain knowledge through the use of mobile technology that is wireless and ubiquitous (Chen, 2013). Mobile learning has shown how effective it is in various research work (Thakre, 2015) (Hussein Meihami, 2013) (Liu, 2016) where the design of the mobile learning application centers the user at the center of the learning environment. The increase of mobile usage as well as the increase of users with access to mobile data or Wi-Fi technology exemplifies the features of mobile learning that include accessibility, immediacy and interactivity. Gamification is successfully used as a means of mobile learning as one of its main principles is to wrap a set of tasks that were seemingly deemed as boring into a more enjoyable context (Gafni, 2017).

Gamification is the process that applies game concept such as game design and game mechanics. This in turn exploits the user's base need in order to increase a user's engagement and motivation to accomplish a goal (Sebastian Deterding, 2011) It is also sometimes referred to "as the selective incorporation of game elements into an interactive system without a fully-fledged game as the end product" (Seaborn, 2015). This concept of combining game elements into an interactive system is not new in tourism it was initially used by airlines in frequent flyer programs as well as other companies that made use of loyalty cards. The idea is to reward a user or in this case a 'player' for making use of your service. So, an airline user will be rewarded with discounted flights on accumulation of a number of flying miles (points) obtained with the same airline. These points can then be used to obtain free flights to a number of locations depending on the number of points accumulated. These elements in turn encourage users to fly with the same airline in order to benefit from these rewards. We can further define the process of Gamification by defining its practical application as a rule based system (Sebastian Deterding, 2011) (Feifei Xu, 2014). Users are the centre point of a game as their actions define the outcome in this rule based system. Feedback systems are then used to provide players with information in the form of scores or penalties. An example of the success of gamification in learning is presented by the authors in (Gafni, 2017) that have successfully used gamification in a vocabulary word game to increase second language acquisition.

3. METHODOLOGY

rule based system. Feedback systems are then used to provide players with information in the form of scores or penalties (Feifei Xu, 2014). This paper aims to design and develop a selfie centred mobile tourist application. A user profile was established in order to better comprehend if selfie and selfie tourism can be

used as a motivational goal to encourage city exploration. This was done through a preliminary questionnaire. The survey carried out asked the users ten questions in order to establish age bracket, travel frequency, selfie frequency and the importance of taking photos when travelling. From the results obtained in the survey, it was established that most of the users that tend to take selfies are between the age of 16 and 30 with most of the participant's stating that they only take selfies on particular occasions [Figure 1].

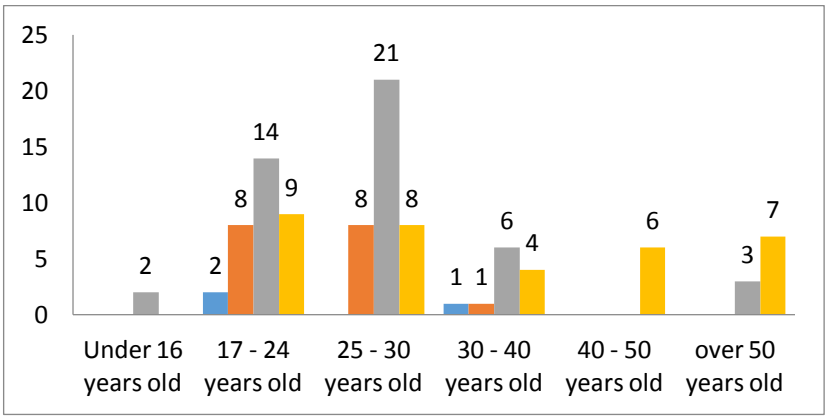

Figure 1. Percentage of Users per Age Group that Take Selfies

Surprisingly the frequency increases with the 50+ age group.

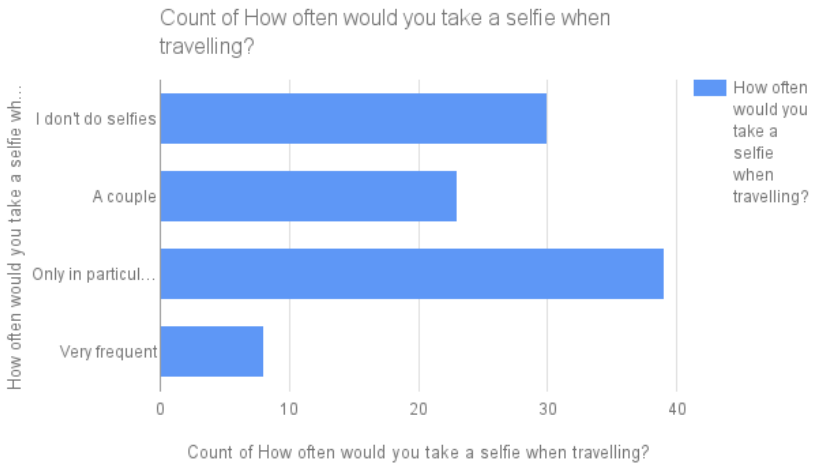

Figure 2. Chart displaying figures on selfie frequency

Almost 70% of the participants take selfie's when traveling. With an encouraging 72.2% feel that photography is very important part of traveling and tourism [Table 1].

Table 1. Photography importance in Tourism

No of Participants (%)	Rating
36.6	**5**
35.6	**4**
16.8	**3**
7.9	**2**
3	**1**

From the survey, it was also established that 80% of participants prefer visiting a lot of different landmarks in a small period of time. Which correlates with the responses gained from the activity question where 61.4% of the participants prefer to explore a city exactly when they reach it [Figure 3].

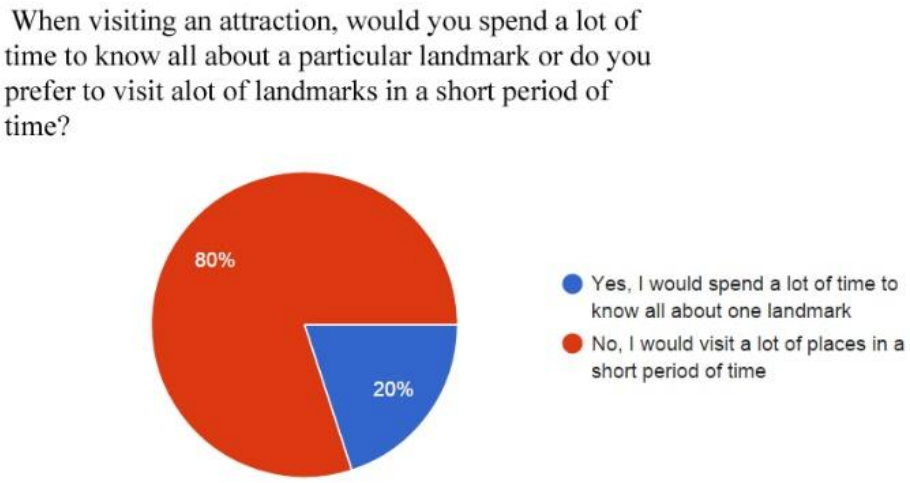

Figure 3. Chart Displaying Figures for Exploration Trends

From this survey, we established that the majority of users take selfies in particular occasions. They like to explore a city and take photos of all the attractions and landmarks that they find. They don't want to spend a lot of time learning about a particular place but they prefer taking in a lot of sights at once. The final question of the survey asked the participants if they would download an app that takes them through a tour of the most captivating landmarks in a city. An encouraging 57% of participants said yes of which the majority where from age 17 - 30. The remaining 43% where divided between 40% maybe and only 3% answered no.

As discussed in the literature the application is designed by using a gamified approach thus, the app uses is a goal based system. The survey results strongly indicate that photography and selfies are strongly related to travel. The premise used for the design approach for this application is that given this goal the application should reward the user with the chance to take a 'selfie' or 'picture' at a pre-established landmark given that the user has managed to get to that location.

The city that the application was built for is Valletta City in Malta. This choice was mainly motivated by the fact that Valletta is rich in cultural heritage, it has the same ecosystem as any large city in Europe and is a perfect test base for the application. The captivating landmarks where chosen on their Visual impact, historical and sociological importance [Table 2].

Table 2. Landmarks

Landmark
Parliament Building
Auberge de Castille
Saint John's Co-Cathedral
Palace Armory
War bell memorial

The user navigates through the city by accessing his current location through smartphone GPS accessed from the application. All the chosen landmarks are represented with an icon [Figure 4].

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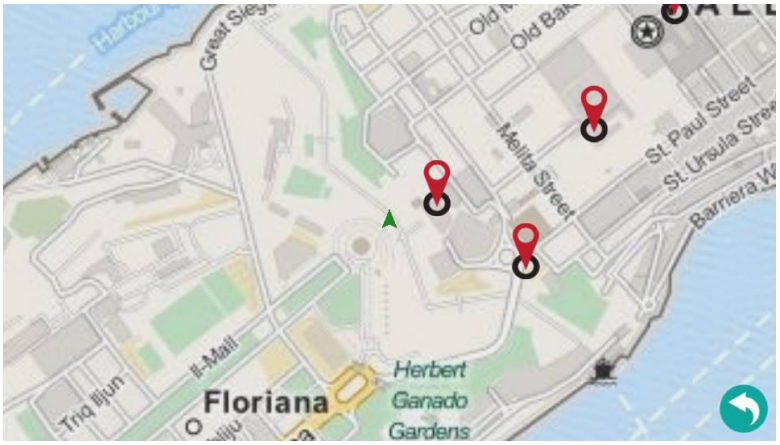

Figure 4. Screenshot GPS Map

If the user clicks on the icon he will be presented with a bit of information on the target landmark as well as an added incentive to visit the site. This incentive was in the form of unlockable camera filters [Figure 5].

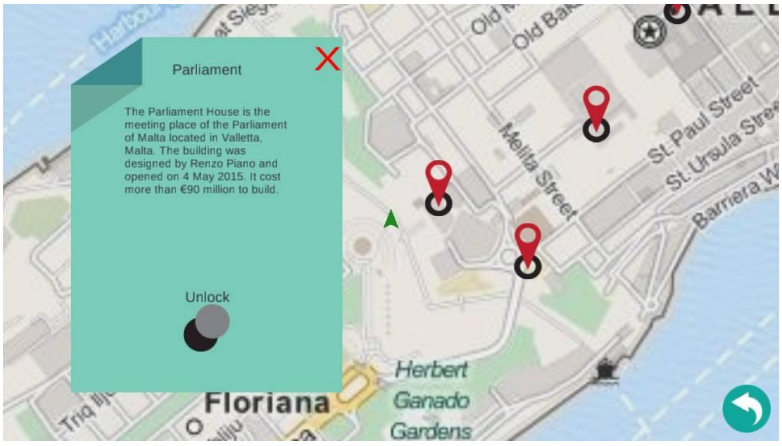

Figure 5. Screenshot Information display

The user is able to take photos only if he is within range of a target location. Once the user is within location, a camera icon will start flashing in the lower right corner. Once pressed the user has the option to take a ‘selfie’ as well as apply any photo filters that they have unlocked [Figure 6].

Figure 6. Screenshot of Selfie Range

Once the photos are taken they are automatically added to an auto generated album which is a visual journey of the path taken by the user to explore the city.

4. EVALUATION

The prototype application developed for this paper was evaluated by a group of participants with age group ranging from 25 – 30. The participants where given the application and briefly explained how it works. They were then left to explore the city through the app. An interview was then carried out on each individual participant. The questions asked during the interview investigated whether the participants felt motivated to explore the city through the application, how easy it was to navigate through the city by using the application and if they would download similar applications next time they visit a city.

All participants felt that the application was easy to use. One of the participants elaborated on the fact that the application was fun and educational. "It was fun and interactive, definitely something I'd use again and the info provided turned it into a learning experience. Also, knowing when to take a photo makes it easier to enjoy ones surrounding without having to worry that a photo was not taken in time".

It is encouraging to note that they felt sufficiently motivated to visit all the landmarks and would definitely, given the chance, download a similar app on their smartphones.

5. CONCLUSION

This paper intended to establish if 'selfie' and 'selfie tourism' is a sufficient motivational factor in a goal based mobile touristic application. Initial research was done to establish typical users for such an application as well as the evaluation of a selfie centred mobile application. The results from the implementation are encouraging especially as the results confirms the premise that the paper tried to establish.

More work needs to be done in order to test the application on a wider set of age groups and establish viability with certain groups which might traditionally might be averse to such technology. This will yield clearer results for future research in this area. An interesting point that came up in the survey is that the oldest age bracket where the ones more interested in covering as many landmarks as they can, in a short amount of time. Reasons cited for this was that they felt that they probably are not going to return to the area so they would prefer to make as many memories as they can. On the other hand, they were not prone to download such an application. This might be due to the problems in the digital divide and the feeling that such applications are not catered for senior citizens.

Given that this study is a proof of concept at the stage of submission further work in evaluating the application in terms of knowledge acquisition need to be conducted. This evaluation would focus on the knowledge gained by users in terms of the points of interests used in the applications as this is one of the key aspects found in both gamification as well as mobile learning.

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