



ERASMUS UNIVERSITY ROTTERDAM  
Faculty of Economics and Business  
Marketing

Marketing Master Thesis  
“The effectiveness of social media in the museums sector “



Supervisor: Dr. Nel Hofstra

Author: Despoina Emmanouilidi

Student number: 371054

Department: Marketing

Rotterdam, 2014

*“Social media describes a variety of new sources of online information that are created, initiated, circulated and used by consumers intent on educating each other about products, brands, personalities and issues”*

*(Blackshaw & Nazzaro, 2004)*

## ACKNOWLEDGEMENTS

This research project constitutes my Master Thesis for the Master in Economics and Business with specialization in Marketing at the Erasmus University Rotterdam. It would not have been possible to write this thesis without the guidance and support of several kind people around me.

Above all, I would like to express my gratitude and gratefulness to my supervisor Dr. Nel Hofstra, for all her help and critical guidance during the writing procedure of my thesis, and all the professors from the Marketing program for the overall knowledge and inspiration they offered me. Furthermore, I want to thank my parents for all their support throughout my academic life.

Moreover I would like to thank my friends Christos, Artemis, Nikolas, Stevi, Anthi and Ilias for all their patience and support during this academic year and for their helpful comments during the whole process of writing this Thesis. Last but not least, I would like to thank all the participants of this survey, because without them I would not be able to complete my research.

After all, the process of writing this thesis has been a pleasant ‘journey’ filled with a lot of effort but also satisfaction. I hope everyone enjoy reading my thesis, as much as I did writing it.

Despoina Emmanouilidi

Rotterdam, May 2014

## ABSTRACT

The role that Internet and especially social media are playing in people's everyday activities is constantly increasing. The rapid development of these new fields has changed the way museums activating their marketing strategy. Museums are starting to recognize that these new media platforms have lots of potential in reaching new audiences and retaining the current ones.

This study reviews Internet, social media and web 2.0 literature, the relationships among museums, marketing and social media, and highlights which factors are important to create a positive relationship between the museums' Facebook pages and active Facebook users. The Extended Technology Acceptance model (TAM) and some other extra factors were adopted to describe how museums' marketing, through Facebook, affects the users attitude towards a museum Facebook page. In a further stage, this study describes how this attitude influences the intention of a person to visit the actual museum. An online questionnaire, with 177 participants was conducted in this study, providing data regarding how important are for the Facebook users some factors – characteristics of the museum Facebook page. Diverse statistical analyses were used to examine the hypotheses.

The data analysis showed that only the perceived ease of use, the perceived enjoyment, the perceived entertainment of a museum Facebook page and the art involvement a person has, affect positively the attitude of a user toward this Facebook page. Furthermore, the level of the attitude influences the willingness of a person to visit the museum itself.

## Table of Contents

<b>ACKNOWLEDGEMENTS</b> .....	<b>3</b>
<b>ABSTRACT</b> .....	<b>4</b>
<b>1. INTRODUCTION</b> .....	<b>6</b>
<b>2. THEORETICAL FRAMEWORK</b> .....	<b>8</b>
<b>2.1 INTERNET, WEB 2.0 &amp; SOCIAL MEDIA</b> .....	<b>9</b>
<b>2.2 MUSEUMS, MARKETING AND SOCIAL MEDIA</b> .....	<b>11</b>
<b>3. RESEARCH QUESTION &amp; HYPOTHESES BUILDING</b> .....	<b>15</b>
<b>3.1 RESEARCH QUESTION</b> .....	<b>15</b>
<b>3.2 HYPOTHESES BUILDING</b> .....	<b>16</b>
<b>4. METHODOLOGY</b> .....	<b>22</b>
<b>4.1 QUESTIONNAIRE</b> .....	<b>23</b>
<b>4.2 SAMPLE AND SURVEY DISTRIBUTION</b> .....	<b>25</b>
<b>5. ANALYSIS</b> .....	<b>28</b>
<b>5.1. RELIABILITY ANALYSIS</b> .....	<b>28</b>
<b>5.2. FACTOR ANALYSIS</b> .....	<b>29</b>
<b>5.3. HYPOTHESES TESTING</b> .....	<b>36</b>
<b>6. CONCLUSIONS</b> .....	<b>44</b>
<b>6.1 DISCUSSION</b> .....	<b>44</b>
<b>6.2 MANAGERIAL IMPLICATIONS</b> .....	<b>45</b>
<b>6.3 LIMITATIONS &amp; FUTURE RESEARCH</b> .....	<b>46</b>
<b>1. LIST OF REFERENCES</b> .....	<b>48</b>
<b>APPENTICES</b> .....	<b>54</b>
<b>Appendix I: Questionnaire and Online Survey</b> .....	<b>54</b>
<b>Appendix II: Facebook Museum Pages</b> .....	<b>61</b>
<b>Appendix III: Items per variable</b> .....	<b>64</b>
<b>Appendix IV: SPSS output-Descriptive</b> .....	<b>66</b>
<b>Appendix V: Factor Analysis</b> .....	<b>66</b>
<b>Appendix VI: Correlation</b> .....	<b>73</b>
<b>Appendix VII: Mean of Willingness (T - test)</b> .....	<b>74</b>

## 1. INTRODUCTION

Nowadays, Internet has become a vital part of the every day life for an enormous percentage of the global population. Internet is playing a dynamic role in entertaining, informing, and making the communication of the active users easier and faster than the other media. Social media are understood to be applications of Web 2.0, supporting communication, interaction, and formation of relationships among a large number of users. Companies that have online presence, in any field of business, have started using social media in their integrated marketing strategy (Scott 2010; Kaplan & Haenlein, 2010).

According to NielsenWire (2010), social media, in particular the social networking sites are very popular among online users. More specifically, Facebook was the most popular one as it had 845 million user on February of 2012 as Wilson et al. (2012) commented in the article “A Review of Facebook Research in the Social Sciences”. In the beginning of 2014, the active users of Facebook are reaching the 1,310 billion.

Previous studies have proven that the major reasons why people are joining Facebook is that they are looking for socialization, information, status, and entertainment (Part et al., 2009). One example is the Facebook “like” button; people actually click on it in order to cover informational, entertainment or some other social needs. In addition, it is a way to support a brand and/or give feedback to it, to look for further information, to show-off and in addition to increase their prestige from being fans of a brand. (Sicilia and Palazon, 2008).

In this research, the focal point will be museums, which can be perceived as “brands” selling services to the public. Museums can also be perceived as “values” brands, brands with an ongoing purpose, museums are institutions that contribute with their own way to the overall social value (Kiely and Halliday, 1999). Museums are considered as cultural organizations delivering the knowledge, the art, and the heritage. Marketing is strongly connected to the museums, the roots of this relationship can be found in cultural marketing in 1970, because until then marketing was focused only on products and services. As Philip Kotler (2005) pointed, there are more fields to study marketing and one of them is «Cultural Marketing» which includes museums and performing arts.

As Capriotti and Kuklinski (2012) stated,

“The Internet has gradually become increasingly important in museums communication and is sure to be implemented on a widespread basis in the near future, providing interactivity, flexibility personalization and collaboration between museums and their public”.

As of the Internet era, in recent years the art organizations, like galleries, theaters and especially museums have started to use social media to broaden their accessibility and increase their awareness through current and potential customers. The way the museums are trying to engage the various publics has changed, and the relationship with the people has become more interactive through social media.

Cultural organizations in performing and fine arts, where museums belong, seek to explore and analyzing the opportunities of Web 2.0 in their marketing strategy. Social networks have the potential to show the revolution in the way, cultural organizations, like museums and consumers – visitors, communicate and interact. In that way, it is becoming more obvious that in the future years, insights about this type of communication will be acquired through social media (Kotler and Kotler, 2008).

The competition that museums are facing is big; museums are competing not only with other museums and art galleries, but also with every other cultural or educational organization (Kotler and Kotler, 2008). This means that in the era of Internet, museums should adopt more effective and creative strategies, like social networking sites, to engage the actual and potential visitors with their services and products. Therefore, and through the effectiveness of word of mouth in these new channels as Facebook the number of the customers will be augmented in comparison to the prior social media era (Hausman, 2012).

The main purpose of this study is to measure the effectiveness that social media platforms may have in the museum sector, and how this new, innovative channel can help to broaden the museum’s audience. Recently the “social media and museums” has become an emerging topic, especially from the media perspective. This study stresses out this phenomenon and examines it from another point of view, the marketing perspective, with a research to the behavioral reactions of consumers and the effectiveness in museums visitation.

## 2. THEORETICAL FRAMEWORK

The focus of this study is to examine the effectiveness of the usage of social media on the museum sector nowadays. Thus, such a research requires the examination of two main subjects, social media, and museums. The first part of this paper is about Internet, Web 2.0, social media, and other previous researches that have been made about these concepts, their usage and effectiveness as marketing tools. In this first part, the focus will be on Facebook, the most extensively used social media platform in our days.

The second part is about Museums, the role that these institutions have today, the services are providing, and their interest to attract more visitors together with the methods that are using. Furthermore, one more field is going to be discussed, the history of the marketing in the museum and its roots in “Cultural Marketing”. In the end of the second part, the relationship that museums have with social media and specifically with one social networking site, Facebook, is going to be examined, based on the recent literature.

In the third part, the research question is going to be stated based on certain variables. These independent variables are: perceived ease of use, perceived usefulness, perceived enjoyment, entertainment, informativeness of a museum Facebook page and art involvement. After the definition and the literature that stated for these terms, the final hypotheses will be proposed.

In this research, the terms customer and visitor are used interchangeably because from the marketing point of view, museums customers are its visitors, actual and potential ones.



## 2.1 INTERNET, WEB 2.0 & SOCIAL MEDIA

### 2.1.1 INTERNET

Today, Internet has become an essential part of our everyday life. Due to this fact, it has been realized from the commercial market that this channel has the opportunity to become one effective vehicle of commercial communication.

“The Internet influences all aspects of human endeavor from the way in which organizations operate to the way people shop and spend their leisure time. Yet, perhaps the biggest transformations have been in the way in which we socialize and seek-out and spread information” (Amichai-Hamburger & Ben-Arzi, 2000).

Marketing has been transformed through Internet, because of the existence of a broader range of products and services available for customers to choose from. Internet introduced a faster way of communication between organizations and customers, it provides many opportunities but also many challenges (Chaffey et al., 2009).

### 2.1.2 WEB 2.0 & SOCIAL MEDIA

*“Social networks are not about Web sites. They’re about experiences.”*

*(Wyshynski, 2009)*

To begin with, “Web 2.0” and “Social media” and are two terms very related and connected to each other, but they have different meaning. On the one hand, Web 2.0 is a foundation not only technological but also ideological. On the other hand, social media is a set of applications based on Internet (blogs, content sharing sites, virtual social worlds, etc.) built on this foundation. Social media include texts, photos, pictures, and networks. These videos, photos, social networking sites in addition with opinions, views, and interests are creating the main content of social media that is called Consumer-Generated Content (CGC) (Drury 2008).

In a latest study, Berton (2012) mentioned that social media are not only text and pictures, except from adding friends, and posting photos, it can create many new and interactive channels between customers, and organizations and it can build relationships among them. According to previous studies social media have an impact on how people behave in the online platforms, how they communicate, interact, share content, upload files or photos, build online communities. Because of the evolution of social media the whole environment has changed, companies and various kinds of organizations that were active online changed their behavior through their audience (Lai & Li, 2005).

As Drury (2008) stated social media can help organizations to have a more direct and personalized relationship with their audience. Furthermore, regarding marketing and as many researchers have pointed out, the usage of social media as a marketing tool is not so costly as other traditional tools and most of the times is more effective, because it provides much more opportunities to influence the consumers behavior and intention as it has direct access to them (Dholakia & Bagozzi, 2001). As it is noted, one decade after, by Hana et al (2011) social media platforms have many advantages as channels that are more effective in creating engagement, loyalty, and experience to the customers. Even though organizations which are using them, must take into consideration that their overall marketing strategy, that includes the traditional tools of marketing, must be connected with these new channels.

### 2.1.3 FACEBOOK

To begin with, platforms like Facebook, Instagram, Twitter, and Pinterest are social networking sites (SNS). The social networking sites are part of the social media. Nowadays, Facebook is the most popular one, it was founded in 2004, and it had 1.11 billion active users in a monthly basis in March of 2013 (Facebook.com, 2013). Facebook is considered as a successful medium to improve the engagement of customers. Companies and organizations are adding these social networking sites, like Facebook, to their strategy in order to improve the communication with their audience and enhance the power of these communities for their products and services. (Kaplan & Haenlein, 2010)

In Facebook, users interact with each other, communicate, and build relationships based on trust and similar opinions and points of view. With the advent of social media, people became more active and the consumer behavior has changed through “consumer socialization”. There

are several motivations for the activities in the social media, which are different from one person to another. These motives may be: the need to belong, curiosity, recognition, or enjoyment (Kietzmann et al.,2012).

Because of the arrival of social media and social networking sites, there was a big revolution in the scenery of the overall market. Many companies, but also a variety of organizations, started to use these new marketing tools to explore their challenges and the opportunities. One of the positive aspects of social networking sites is that organizations can obtain “fans” and “followers”, which can be considered as loyal customers. The number of the loyal customers is much more easier to measure through a Facebook page rather than through other traditional methods. In addition, through social networking sites organizations can get some suggestions or some complaints directly from their audience (Lee et al., 2012).

The main result of social media platforms such as Facebook is that they have turned Internet from an informative platform to an influential one. As a result, nowadays is almost obligatory for all different types of organizations to use social networking sites as a part of their marketing strategy (Hana et al. 2011).

## **2.2 MUSEUMS, MARKETING AND SOCIAL MEDIA**

### **2.2.1 MUSEUMS**

According to Yorke and Jones (2007), the word “museum” has different meaning for various groups of people. Although, the definition proposed by the International Council of Museums in 2007 is the following:

“A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment.” (Yorke & Jones, 2007)

The primary purpose of museums has been to collect, study and expose objects related with arts and culture. The original target audience of museums was small groups of very involved people like professionals. Nowadays, and as Gilmore (2002) states, museums have shifted

their interest to the interaction with larger audience. Because of this intention of museums' sector to attract more and differentiated visitors and to build relationships with them, the marketing strategies were a fundamental element of their management. According to Hooper and Greenhill (1994), the relationships with these differentiated audiences have the equivalent worth as the collections of a museum.

Regarding competition and according to Kotler and Kotler (2000), museums competitors are not only other museums but also all the other providers of entertainment and educational activities. The museum sector has experienced many big changes in the last years; there was an explosion of the leisure industry followed by a significant growth in the actual number of the museums. These new circumstances have affected museums' competitive environment, competing now with all the leisure activities and innovative venues (Burton & Scott, 2003).

In that way today's museums, in order to become more competitive, are trying to provide to their audience diversified activities, services, and experiences, creating customer satisfaction, and become more visitor oriented than in the past. Museums should try to find new and innovative ways to attract potential visitor and enhance their engagement with the institution. "Museums now compete for the leisure dollar, and in an increasingly competitive globalized marketplace." (Ruth Rentschler & Anne-Marie Hede, 2007, book "Museums Marketing").

### **2.2.2 MUSEUMS MARKETING**

Until 1970, marketing theory was focused only in products and services, and their 4P's (price, place, promotion, product). Other non-commercial organizations like museums, performing art groups, city governments, churches, etc., were studying by the public relation researcher and scholars. The change came from Kotler and Levy in 1969, when they introduced a more broadened proposal of marketing and some new areas that have to be studied. One of these areas is Cultural Marketing, which includes museums and performing arts.

As Philip Kotler stated in 1972, the organization is the museum, the product is the cultural appreciation, and the "general public" is considered as the customer group. The start has been made from Kotler, after that many scholars are starting to use the term "museums marketing". From 1975-1983, the literature about museum marketing is based on the educational role of the museum for the public. After that, as first Shostack pointed in 1985, museums product is

the kind of service that is taking place in a real environment, in a building with people – visitors, creating ways of producing interest and engagement. As Betason added in 1991, the delivery of that kind of services can be explained as selling an experience. In that way based on the literature, museums marketing have many common elements with services marketing. Museum is an institution that is offering services to the visitors, bearing in mind that services are "activities, benefits and satisfactions which are offered for sale or are provided in connection with the sale of goods" a definition given from the American Marketing Association.

On the one hand, and as it mentioned above in the definition of a museum, museums are considered as non- profit organizations, which have as primary goal to inform and educate the people (Lewis, 1992). On the other hand, there is another part of the literature that wants museums to be considered as profit organizations, in this approach all the marketing methodologies can be transferred to the museums. Because of a fast moving society and environment, the existence of “museum industry” became a reality (Musees et economie, 1992 a, b). As a result, a museum is taking into consideration costs, profitability, management, and marketing. According to McLean in 1997, the focus of museum marketing was on the type of the relationship among the museum, the audience, and the market.

Museums are institutions that are characterized by complexity and diversity of services, providing a very broad range of activities such as exhibitions, educational visits, publications, etc. Because of the existence of this complexity and the broad and diverse audience, museums should understand the needs and wants of the visitors using some marketing techniques (Yucelt, 2008). However, museums mission is remaining the same, to educate and public about culture, art, and heritage. A museum can use and adopt marketing tools and marketing oriented strategy to attract more “customers”, copying with large companies in order to survive and succeed in the world’s competitive market, but still keeping it’s responsible role in society in general (IMP Conference).

### 2.2.3 MUSEUMS AND SOCIAL MEDIA

Museums are institutions related with culture and art and present their exhibitions and artifacts in a physical environment. Nowadays, because Internet and social media are heavily involved in our lives, museums also started using these platforms extensively like various organizations and companies did. The activity of the museums has changed noticeably, getting a more active and creative role with the use of the new media. Today almost every museum has a website, which informs the online visitors about the museum, the prices, the timetable, the exhibitions and the upcoming events. In addition, there are almost 2.500 museum pages on Facebook and around 1100 on Twitter (<http://www.museum-analytics.org/museums/>). Many studies have been done examining the relationships between museums and the social media.

As Kevin Pfefferle (2009) stated, “By giving individuals a real, personal connecting point with a previously ‘faceless’ institution, those who interact with the museum on these networks feel more involved”. Social media are used as a tool for building the “brand image” of the museum. Moreover, as Jenny Kidd (2011) stated, museums are using social media to inform people about the events and the exhibitions that are scheduled for the near future. Social media platforms provide for museums a new interface to connect, to attract new and different kinds of audience. In addition, social media provide an interactive and collaborative way of communication between museums and their public (Capriotti & Kuklinski, 2011). Through social networking sites, museums are creating a stronger link with the public, giving information about the exhibitions, the events, and the museum itself.

Another advantage that social media can provide is that through social networking platforms the museum can not only use the two- way communication, but also the multi – way one by encouraging the active interaction of their audience. Museums except from using social media for advertising reasons, are also trying to persuade the users of these channels to become more active and help them create online content (A. Fletcher & M. J. Lee, 2012).

### 3. RESEARCH QUESTION & HYPOTHESES BUILDING

#### 3.1 RESEARCH QUESTION

A wide range of studies has been done so far from different academic disciplines about the social networking sites and especially Facebook. Some previous studies have tried to find out the usefulness of this platform as a business tool. According to, Dholakia and Durham (2010), Facebook is an effective marketing tool able to reach niche target groups. Some other studies in this field are focusing on the motivations that the Facebook users have, such as the need for social engagement (Murray, 1938). Furthermore, Lee et al. (2012) have examined the effect of some emotional factors in the attitude of the users across Facebook pages for events, and their level of willingness to go to these events. The result of this study was that social media platforms could be perceived as very effective marketing channels, while the positive attitude towards using Facebook pages has a positive effect on the willingness of users to attend the event. According to this study, it is important also to mention that the positive attitude a user has for a Facebook page can be seen from his/her intention to push the “like” bottom, and after that “sharing” specific content for this event.

From the above, the research question can be formed as such:

***“To what extent the social factors/characteristics of the museum Facebook page and the involvement a person has with arts, would influence the attitude of a user towards a museum on Facebook? The more positive this attitude is, the higher is the willingness of this person to visit the actual museum.”***

The reason that I have chosen museums’ sector lies on the fact that nowadays museums have already started to use these new media channels in their marketing strategy and it would be very interesting to see the effectiveness that Facebook pages may have in the willingness of the public to go to a museum exhibition or event.

In order to answer the aforementioned research question, the Technology Acceptance Model (Davis, 1989) will be used as the basic theoretical background. According to King and He (2006), the usage of TAM is widely accepted to measure the behavioral intention of users in a new technology, or a new channel. So, in this situation TAM will be used to examine the effectiveness of Facebook pages as marketing tools for museums and measure the users

attitude towards these pages. Moreover, this study will benefit museums in understanding the effect that social media platforms, particularly Facebook, could have in the visitation of these institutions.

An extended analysis of this model will follow in the paper, but first a brief literature review of the other variables, the art involvement, the entertainment and the informativeness of a Facebook page, the attitude towards museum Facebook page and the intention to visit the actual museum. These variables in addition with the variables of the TAM that are going to be used in the conceptual framework are going to be examined, and the hypotheses will be based on them.

## **3.2 HYPOTHESES BUILDING**

### **3.2.1 USERS ATTITUDE TOWARDS FACEBOOK**

#### **“TECHNOLOGY ACCEPTANCE MODEL”**

As first Davis proposed in 1989, the technology acceptance model (TAM) has been used to study the users' intention to adopt a novel technology. This widely accepted model is based in two major behavioral beliefs; the perceived ease of use (PEOU) and the perceived usefulness (PU). It examines the effect that these beliefs may have on the intentions of an individual through the acceptance or the rejection of an innovative technology or system. The TAM has origins that can be found in the Theory of Reasoned Action (Fishbein & Ajzen, 1975), a model focusing on the ways that people create behaviors. Furthermore, Gefen (2003) proposed that when users are becoming increasingly familiar with a technology the effect of their perceived ease of use is decreasing.

In this paper, social networking sites are going to be treated as a new technology system and the users of these platforms as computer users so TAM can be adapted, as Pookulanga et al. (2011) similarly did in their study. Furthermore, in this study the familiarity with social networking sites of the respondents is quite immense; as a result, the effect of PEOU may be insignificant. On the other hand, PU can be described as the impact that the usage of this new technology will have in the implementation of the person and thus it has a significant effect in the behavioral intentions (Hausman & Siekpe, 2009). In the previous researches, TAM was



broadly used because of its simplicity. Afterwards, an extended TAM emerged, as proposed by Hsu and Lu (2004) that could be more explanatory than the original one. In 2001, Moon and Kim added “perceived playfulness” into TAM as an additional drive for the adoption of the World Wide Web.

W.Lee et al. (2012) extended the usage of TAM into events marketing. The focus of their study was on the acceptance of marketing through event Facebook pages using an extension of the TAM with “perceived enjoyment” as an alternative for “perceived playfulness”. As they stated in this study about Facebook platform “[...] users can develop ample experience with Facebook when their usage is accumulated, the authors proposed that the effect of perceived playfulness eventually comes to be dominated by perceived enjoyment” (W. Lee et al, 2012, page 821). Thus, perceived enjoyment (PE) shows the degree of the enjoyment that a person gets from the activity of using a certain platform as Facebook. Based on the above literature the extended TAM used by W.Lee et al. will be adopted. This model includes the perceived usefulness, the perceived ease of use, and the perceived enjoyment of a museum Facebook page. These factors are notional for the attitude of the user of this social networking site toward the museum page. Moreover, such attitudes toward a Facebook page may have a positive impact in the actual willingness of a person to go to a museum exhibition or event.

From the museums’ perspective, the perceived usefulness of a Facebook page could be outlined as the conviction of the user that using this museum Facebook page could have an effective result. In the case of museums on Facebook as built on previous argumentation, it can be expected that:

*H1: The perceived usefulness of a Facebook museum page will have a significant impact on the attitude of a user towards this page.*

Furthermore, the perceived ease of use of a museum Facebook page signifies the degree that the page is seen by the users as an easy way to check the museum exhibitions, news, and events (i.e. Facebook makes it easy to realize and check the activities of your friends). According to the theory of the extended TAM, the perceived enjoyment is its third element, which can be an indicator of how users will behave toward a museum Facebook page. According to the previous studies, it is expected that:

*H2: The perceived ease of use of a Facebook museum page will have a significant impact on the attitude of a user towards this page.*

*H3: The perceived enjoyment of a Facebook museum page will have a significant impact on the attitude of a user towards this page.*

### **“USES AND GRATIFICATIONS”**

To begin with, many studies have been made around the atmospherics of websites that can add to the web page a competitive advantage. In comparison with the websites, in the social networking sites, the atmospherics are almost the same and Facebook pages have standard human elements like colors, letters, graphics, and the overall organization of the page is already structured. As a result, this study cannot examine the atmospherics of the pages to exclude results.

In this study the attitude towards social networking sites it is going to be examined through two more variables, informativeness and entertainment. A successful website can be positively evaluated by the information that it contains and the entertainment it offers (Eighmey, 1997).

The “uses and gratifications” (U&G) model is going to be adopted in this study as it contains two basic elements: perceived informativeness and perceived entertainment. These two factors - characteristics are likely to affect positively the attitude of users toward the site (Chen et al., 2002), in this case the attitude towards Facebook. As a result, these variables were being examined as websites assessment features, to measure the value that users give to these websites (Chen & Wells, 1999).

*H4: The attitude of a user towards a museum Facebook page is positively related to the perceived informativeness.*

*H5: The attitude of a user towards a museum Facebook page is positively related to the perceived entertainment.*

### 3.2.2 SOCIAL FACTORS

#### **“Need to belong” – The Theory of Planned Behavior**

Nowadays the popularity of social networking sites is more than obvious and many studies have examined the behavioral intentions of these platforms’ users. One very well known model for predicting and understanding people’s behaviors is the Theory of Planned Behavior (TPB). According to this model, “behavior is determined by one’s intentions to perform behavior” (Ajzen I., 1991). A standard TPB has three main elements: attitude, subjective norms, and perceived behavioral control. In a recent study (Pelling et al., 2009), an extended TPB model was used, including self-identity and belongingness as additional variables, in order to examine the intentions and behaviors of users towards social networking sites.

Social media is an exclusive channel that people have many motivations to use it, like getting informed, communicate with others, and fulfil some of their social needs. One of these needs is the “need to belong” or “belongingness” (Baumeister & Leary, 1995; Leary et al., 2001), can be defined from the feeling that a person has to be widely accepted from the social circle, and the desire to built and maintain relationships with other individuals. Social networking sites can fulfill this need by providing social acceptance, the opportunity to express personal opinions to a broader public, and the ability to influence other people.

The “need to belong” or “belongingness” is not same and equal for every individual; it is more possible for a person who has this need in a higher degree to become a part of a social networking site community (Ho & Dempsey, 2010). In that way, as Facebook is very popular in our days, young individuals communicate and interact with others through this platform. As it is mentioned above, using Facebook includes a wide range of actions, sharing messages with friends, upload pictures, videos, events, liking pages of brands, musicians, museums, festivals, commenting on others uploads and sharing content in the personal page of a person. Consequently, if someone has the need to belong in a social circle that is interested in arts and especially museums then it is more likely to be a member of the museum’s Facebook page.

The most used “need to belong scale” for measuring the belongingness of a person is the scale used by Leary, Kelly, Cottrell, & Schreindorfer (2005) with 10 items. Nevertheless, because the need to belong is a very big and complex variable is not going to be included in the conceptual framework of this study.

### 3.2.3 ART INVOLVEMENT

In this current study, the effect of art involvement another external variable will be tested in the attitude of a user towards a museum Facebook page. According to Zaichkowsky (1985), involvement can be defined as “a person’s perceived relevance of the object based on inherent needs, values and interests”. Moreover, when a person feels involved that means that he/she feels “personal relevance” (Celsi & Olson, 1988). It is very important to study involvement because the different degree of involvement may lead to different responses and attitudes of the audience. Most of the times, involvement is observed as personal relevance and interest about the product or the service (Slater & Armstrong, 2010). Researchers in the leisure industry, where museums belong, started from 1990 to examine relationships such as involvement and loyalty (Iwasaki & Havitz, 1998).

In the current study, the involvement measurements will be adopted from O’Cass (2000) article, which is examining the purchase decision and involvement in fashion wear. Fashion involvement, as it stated in this article, is appropriate for measuring also art involvement. As a result, these is the hypothesis, considering all the above, that is proposed:

*H6: The attitude of a user towards a museum Facebook page is positively related to the level of the involvement with arts that a person has.*

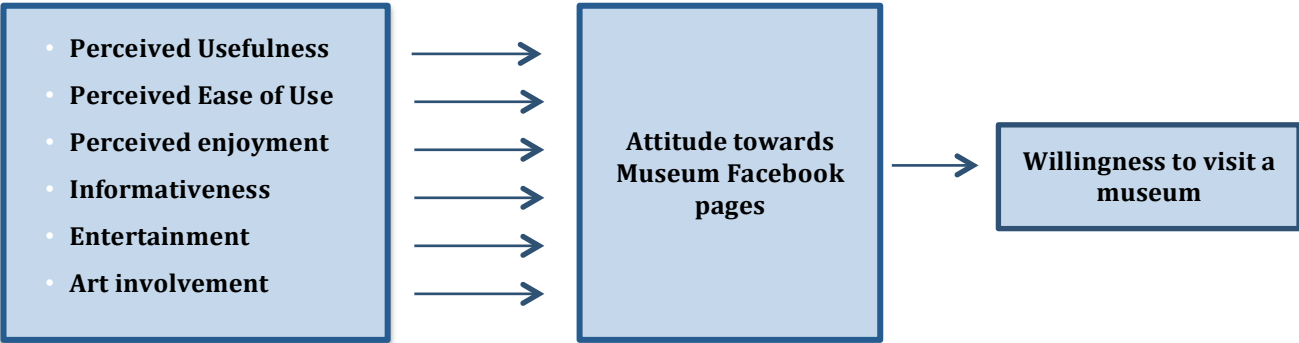
Based on the aforementioned theories, Theory of Reasoned Action and Technology Acceptance Model, it is stated that the actual behavioral intention is determined by “the attitude towards the system” (Venkatesh, 2000). The TAM of a Facebook page indicates the attitude of a user towards this page. Additionally, positive attitudes have a significant impact on the user’s willingness to attend an event or visit a museum.

To sum up, if a person has an overall positive attitude towards a museum Facebook page, this could lead to greater intention of this person to visit the museum event or exhibition. Thus, when a museum organizes an event on Facebook or it promotes an exhibition it is more likely for someone with positive attitude towards the museum Facebook to attend.

Based on the above, the last hypothesis can be defined as follows:

*H7: “People with positive attitude towards a museum Facebook page will have higher willingness to visit a museum in comparison with those who have less positive or negative attitude”*

**3.2.4 “The Conceptual Framework”**



## 4. METHODOLOGY

After the abovementioned definition of all the main concepts, the variables in this study, the conceptual framework, and the verification of all the hypotheses the method that all these were tested is going to be described in this chapter. Furthermore, this chapter describes the methods, the tools, the survey executed (Appendix I, II), and the scales that were used in order to test the above and find some results for the study. In Appendix III, there are all the scales used into the online survey. This survey will provide primary, quantitative data regarding the perceived values for adopting museum Facebook pages and in a second phase, data about a person's willingness to visit a real museum or art gallery.

Almost all the participants of the online survey have at least a certain level of social media experience and especially Facebook, since the distribution channel was Facebook. The participants of this study, who have voluntarily participated, were asked to follow the links in order to be carried out on the Facebook pages of three museums: the Tate Modern museum-art gallery in London, United Kingdom, the Centre Pompidou in Paris, France, and the Van Gogh Museum in Amsterdam, The Netherlands (Appendix II). These three museums were chosen because all of them exhibit modern and contemporary art and are three of the main tourist attractions in Europe and all three have Facebook pages with a great number of "likes" and followers. Finally, the respondents were asked to return to the survey after they had checked the museums' Facebook pages and complete the rest of the questionnaire, which will be analyzed more extensively afterwards in this chapter.

## 4.1 QUESTIONNAIRE

The questionnaire was executed online through Qualtrics, specific software to collect data online, design, and distribute surveys. As it is already mentioned above the questionnaire was send through the social networking site, Facebook. In the first section, the first five questions, the respondents were asked to answer some questions about their demographic data, gender, age, nationality, income, and education level.

Regarding the second section, the respondent is asked, after visiting the three museum Facebook pages that are mentioned above, if they had ever visited any of these three museums. This question was included in order to verify that each of the respondents saw the Facebook pages before answering the rest of the questionnaire. The three Facebook pages have some differences; the number of “likes” is comparable but not the same, Tate has more than 500,000 “likes” in its Facebook page, Centre Pompidou has more than 300,000 “likes” and Van Gogh almost 150,000 “likes”. Moreover, there are some other characteristics of the Facebook pages that matter for this survey for example the information given and the connection with the official site of other social media.

Right after these questions, the survey continued with the third and major section of the online survey with several statements about the museum Facebook pages. The respondents were asked to grade these statements in a 7-point Likert scale in order to measure how much they agree with the statements, from 1 ‘strongly disagree’ to 7 ‘strongly agree’ used to measure the variables. In this section, six independent variables and the two dependent are going to be examined. The first tree independent variables that will be tested are the elements of an extended TAM, the perceived usefulness, the perceived ease of use and the perceived enjoyment regarding a museum Facebook page, I adapt these statements by W.Lee et al (2012) who used them for measuring the intention of the Facebook users to go a festival event. The statements examined whether the respondents consider the Facebook page for a museum to be useful, if they think it is functional and if they believe that the whole process is enjoyable. For these three variables, nine items in total were used (see Appendix III).

After that, the next three independent variables studied were the entertainment, the informativeness of a museum’s Facebook pages and the art involvement of a person. These statements for informativeness and entertainment were adapted from an article, which is studying the effects of wed interface features on online intentions of consumers (Hausman &

Siekpe, 2009). According to this article, there are many features about a web page but in the present study only some were adapted because it examines the factors not in a web site but an a social networking site, in this case only entertainment and informativeness can be examined here. Entertainment is about how enjoyable, pleasing and entertaining is the Facebook page and informativeness is about how the respondents measure the page as good and relevant are the information. As it is already mentioned, the respondents graded the statements in a 7-point Likert scale. The next variable is the art involvement a person has, which is another independent variable in this study. The art involvement is supposed to influence people to have a positive attitude towards a museum Facebook page. In order to measure the respondents' art involvement a number of statements adapted from O'Cass (2000), nine statements in total were used to measure how art involved a person is.

The last and fifth section of the questionnaire contains the statements for the two dependent variables, the attitude towards a museum Facebook page, and the willingness of a person to visit the museum. For these variables, statements were adapted from W.Lee article, too. The attitude towards museums is depended on all the aforementioned independent variables, whereas willingness to visit is only depending on the level of attitude towards a museum Facebook page. All the items that used for all the above variables, in total thirty-six items, are exhibited in Appendix III.

Before the final and valid distribution of the online survey, there was a pilot for 4 days during which almost 20 people filled in the questionnaire. This pilot was distributed to some close friends and colleagues in order to check the functionality and the trustworthiness of the questionnaire. Based on the respondents' suggestions and feedback some changes were made. An important observation in this pilot was that the average time to complete the survey was 6 minutes including the browsing to the three Facebook pages.



## 4.2 SAMPLE AND SURVEY DISTRIBUTION

Since the study is related to European museum Facebook pages, only social media users that reside in Europe should be reached. The survey was distributed only via Facebook messages. The study was executed in the Netherlands but since distribution of the questionnaire was made online, through Facebook, it was sent to people of different residence, inside Europe and different nationality. The link of the questionnaire was distributed on 209 respondents through Facebook platform. Of those 209, only the 177 were complete. As a result, only the finalized surveys were taken into account and the findings depict the responses of the 177 respondents. From the overall number of the respondents, that their answers were valid and were taken into account, more than the half of the sample were women (58%) and the rest (42%) were men (Table 4.2.1.).

**Table 4.2.1. Gender**

<b>Gender</b>	<b>Percentage (%)</b>
Female	58
Male	42
<b>Total</b>	<b>100</b>

Almost all the number of respondents was between 18 to 33 years old, with the majority (56%) to be 18-24 years old (Table 4.2.2.).

**Table 4.2.2. Age Groups**

<b>Age Group</b>	<b>Percentage</b>
18-24	56
25-33	41
34-44	2
>45	1
<b>Total</b>	<b>100</b>

Observing the results, and as it is revealed in Table 4.2.3, the majority of the people participating in the survey had salary less than 800 euros (71%) and, from and Table 4.2.4 we observe that the largest percentage were master students (68%).

**Table 4.2.3. Salary**

<b>Salary (euros)</b>	<b>Percentage</b>
Less than 800	71
800-1200	21
1200-1600	4
1600- 2000	2
More than 2000	2
<b>Total</b>	<b>100</b>

**Table 4.2.4. Education level**

<b>Education level</b>	<b>Percentage</b>
High school	3
Bachelor	23
Master	68
Doctor	1
Professor	1
Other	4
<b>Total</b>	<b>100</b>

Moreover and regarding the respondents' nationality, 10 nationalities were reached as it is illustrated by Table 4.2.5 below, the vast majority of them were Greek, and the rest were Dutch, Italian, Bulgarian, Belgian, American, Romanian, Russian, Turkish or Albanian.

**Table 4.2.5. Nationalities**

<b>Nationality</b>	<b>Percentage</b>
Greek	76.4
Dutch	16.9
Italian	1.1
Bulgarian	0.6
Cypriot	0.6
German	1.1
Romanian	1.7
Russian	0.6
<b>Total</b>	<b>100</b>

## 5. ANALYSIS

The content of this chapter is the analysis of the data that were gathered through the distribution of the online survey. Besides, the hypotheses that have been proposed in the second chapter, in this chapter these hypotheses will be examined through the analysis of this dataset. As it has been already mentioned in the previous chapter, and more specifically in Appendix III, a number of items have been used to measure each of the nine variables, six independent and two dependent. In order to evaluate these items a factor analysis should be done. After the factor analysis 33 of these items out of 36 remained and the analysis of the hypotheses followed. A multiple regression was conducted to check the first six hypotheses. Finally, the last hypothesis was tested through a t-test.

### 5.1. RELIABILITY ANALYSIS

Before analyzing the relationships among the variables, a Chronbach alpha test, one of the most popular and extensively used reliability statistics, was used as a tool for measuring the reliability of the scales that used to form each of the variables (Chronbach, 1951). Alpha coefficient can take values between 0 and 1, the more close to one is the coefficient the more reliable it is considered to be. The minimum value that Chronbach alpha must take is 0.7 (Nunnaly, 1978) and is the most accepted in the literature; nevertheless, a lower value could be accepted sometimes (Santos, 1991).

In this research, the reliability of the variables was sufficiently high (all values were higher than 0.8), which shows that all variables are reliable and all of them show a relatively good internal consistency as the table below shows. The high scores of Cronbach's alpha were expected, as the items used to measure the variables have been adapted from previous researches.

**Table 5.1: Reliability test - Cronbach's alpha coefficients**

Variable	Cronbach's Alpha	N of items
Usefulness	0.832	5
Ease of use	0.803	3
Enjoyment	0.869	3
Entertainment	0.938	3
Informativeness	0.836	3
Art Involvement	0.971	9
Attitude on Facebook museum pages	0.899	6
Intention to visit the museum	0.837	4
<b>Total</b>		<b>36</b>

## 5.2. FACTOR ANALYSIS

Factor analysis was first proposed by Spearman in 1904, more than one century ago. The core purpose of factor analysis is to identify a way of using a reduced set of factors or components that can better summarize the data. Factor analysis is also being used in many researches in order to evaluate the scales that are used in a research.

There are two methods to implement a factor analysis: the explanatory approach and the confirmatory one (Jöreskog, 1969, 1971). The explanatory approach will be used in this research in order to determine “validity of the data and test that variables were loaded onto the right constructs” (Bryman & Bell, 2007). We need to check if the measurements of the variables in our concept measure precisely this specific concept.

Generally, a factor analysis contains three steps: assessment of data, factor extraction, and factor rotation (Pallant, 2001). The first step examines how suitable are the data for a factor analysis. Two statistical measures are created by SPSS to help access if the data are valid for a factor analysis. The Barlett's test of Sphericity (Bartlett, 1954), which should be significant ( $<0.5$ ), and the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (Kaiser, 1970, 1974) that must have a value between 0 and 1; the value 0.6 is suggested to be the minimum for a proper factor analysis (Tabachnick & Fidell, 2001).

Regarding the factor extraction, a “simple structure” (Thurstone 1947) or in other words a smaller number of factors, can be determined to represent the interrelations among the set of variables (Pallant, 2001). Although there are many extraction techniques available, the most common and favorable one according to Stevens (1996), is the “principal components analysis”. In this part of factor analysis, Kaiser’s criterion - eigenvalue rule (Kaiser, 1970, 1974) was used in order to determine the number of factors to keep. After these two steps, factor rotation and interpretation follows.

### 5.2.1. Factor analysis for all the variants

#### i. Factor analysis of the Perceived Usefulness

From the first table below, we could easily observe that the first factor of Perceived Usefulness consists of only one component. The KMO value is 0.817, greater than 0.6, the Barlett’s level of 0.000 shows that this factor is significant (tables 1 & 2, Appendix V). Moreover, we could easily extract some more information; the first component of the factor explains the 60,440% of the cumulative value. We can also easily observe the other factors, which are 75.156%, 85.189%, 94.109%, and 100.000%.

Component Matrix <sup>a</sup>	
	Component
	1
usefulness_4	.829
usefulness_5	.825
usefulness_1	.791
usefulness_2	.751
usefulness_3	.681

*Table 1: Factor analysis with the items of the perceived usefulness*

**ii. Factor analysis of the Perceived Ease of Use**

Observing the table 2 below, which is the result of the factor analysis for perceived ease of use, we could see that it consists of only one component. The KMO is 0.711 so it is above the minimum 0.6, the Barlett’s level of 0.000 shows that this factor is significant (tables 3 & 4, Appendix V). The first component of this factor shows the 71.748% of the cumulative value.

Component Matrix <sup>a</sup>	
	Component
	1
Ease_of_use_3	.858
Ease_of_use_2	.848
Ease_of_use_1	.835

*Table 2: Factor analysis with the items of the perceived ease of use*

**iii. Factor analysis of the Perceived Enjoyment**

The third factor analysis with the items of perceived enjoyment can be described by the below table, where we observe again that it consists of only one component. The KMO is 0.734 so it is above the minimum 0.6, as the Barlett’s level of 0.000 this factor is significant (tables 5 & 6, Appendix V). The first component of this factor shows the 79.438% of the cumulative value.

Component Matrix	
	Component
	1
enjoyment_2	.908
enjoyment_1	.885
enjoyment_3	.880

*Table 3: Factor analysis with the items of the perceived enjoyment*

iv. Factor analysis of the extended TAM

In this research, the extended TAM is used which consists of three variables. This factor analysis will check if every variable is loading independently and on only one component, to what Thurstone (1947) raises as “simple structure” and the respondents should perceive each variable as independent. This will be checked using the most commonly used orthogonal approach “Varimax method” (Tabachnick and Fidell, 2001). After using this method, it is obvious that we have some cross loadings (more than one variables load on more than one component) – see the table below.

Rotated Component Matrix <sup>a</sup>			
	Component		
	1	2	3
usefulness_4	.840		
usefulness_1	.796		
usefulness_5	.782		
usefulness_2	.577	.330	
ease_of_use_3		.824	
ease_of_use_1		.819	
ease_of_use_2		.740	
usefulness_3	.392	.603	
enjoyment_2			.870
enjoyment_3			.860
enjoyment_1	.327		.810

*Table 4: Factor rotation.*

The next step is to repeat the same procedure again as many times as needed in order to have every item loading separately in only one component. The process was repeated three times and finally there were three items to be excluded: usefulness\_2, usefulness\_3 and enjoyment\_1, (see the tables 7i & 7ii, in the Appendix V). The final table below shows the remaining items.



Rotated Component Matrix <sup>a</sup>			
	Component		
	1	2	3
usefulness_4	.863		
usefulness_5	.808		
usefulness_1	.804		
ease_of_use_1		.856	
ease_of_use_3		.805	
ease_of_use_2		.765	
enjoyment_3			.898
enjoyment_2			.876

*Table 5: Factor analysis included all the items for all the variables of the extended TAM excluded Usefulness\_2, Usefulness\_3 and Enjoyment\_1*

#### v. Factor analysis of the Entertainment

From the table below we could easily observe that the factor analysis of the items of the entertainment consists of only one component. The KMO is 0.757, between zero and one and greater than 0.6, the Barlett's level of 0.000 shows that this factor is significant (tables 8&9, Appendix V). Moreover, from the tables in the appendix we could easily extract some more information; the first component of the factor explains the 89.033% of the cumulative value. We can easily observe the other factors, which are 96.114 % and 100.000%.

Component Matrix	
	Component
	1
entertainment_2	.953
entertainment_1	.952
entertainment_3	.925

*Table 6: Factor analysis with the items of entertainment of the museums' Facebook pages*

**vi. Factor analysis of the Informativeness**

The factor analysis with the items that consist the informativeness variable can be described by the table below, which shows again that it consists of only one component. The KMO is 0.695 so it is above the minimum 0.6, the Barlett’s level of 0.000 makes this factor significant (tables 10&11, Appendix V). The first component of this factor shows the 75.825% of the cumulative value.

Component Matrix	
	Component
	1
informatioveness_2	.911
informatioveness_3	.857
informatioveness_1	.843

*Table 7: Factor analysis with the items of informativeness of the museums’ Facebook pages*

**vii. Factor analysis of the Art involvement**

In the table below, we can see the factor analysis with the items of art involvement. The table shows that it consists of only one component. The KMO is 0.934 really close to 1 and relatively bigger than 0.6 which is the minimum accepted value, as the Barlett’s level of 0.000 this factor is significant (table 12&13, Appendix V). The first component of this factor shows the 81.551 % of the cumulative value.

Component Matrix	
	Component
	1
art_involv_6	.931
art_involv_4	.924
art_involv_2	.916
art_involv_3	.913
art_involv_1	.910

art_involv_7	.907
art_involv_8	.892
art_involv_5	.878
art_involv_9	.854

*Table 8: Factor analysis with the items of art involvement*

**viii. Factor analysis of the Attitude towards a museum Facebook page**

The factor analysis with the items of the attitude towards a museum Facebook page can be described in the below table, we observe again that this factor consists of only one component. The KMO is 0.846, so it is above the minimum 0.6, as the Barlett’s level of 0 this factor is significant (tables 14&15, Appendix V). The first component of this factor shows the 66.850% of the cumulative value.

Component Matrix	
	Component
	1
attitude_4	.850
attitude_3	.842
attitude_6	.839
attitude_1	.827
attitude_5	.780
attitude_2	.764

*Table 9: Factor analysis with the items of the attitude towards a museum Facebook page*

**ix. Factor analysis of the Intention to visit a museum**

The factor analysis with the items of the intention to visit a museum can be described by the below table, which shows again that it consists of only one component. The KMO is 0.743 so it is above the minimum 0.6 and the Barlett’s level of 0.000 this factor is significant (tables 16&17, Appendix V). The first component of this factor shows the 67.507 % of the cumulative value.

Component Matrix	
	Component
	1
Intention_to_visit_3	.887
Intention_to_visit_2	.862
Intention_to_visit_1	.834
Intention_to_visit_4	.688

*Table 10: Factor analysis with the items of the intention to visit a museum.*

### 5.3. HYPOTHESES TESTING

#### 5.3.1. Number of items per variable

After the above factor analysis each variable can be formed using the SPSS software by transform and compute functions. With this process, SPSS compute the mean of all the different scales that are used for each of the variable. An overview of the number of items used in order to custom each variable follows in the table below.

**Table 5.3.1: Number of items per variable**

Variable	Number of items
Ease of use	3
Usefulness	3
Enjoyment	2
Entertainment	3
Informativeness	3
Art Involvement	9
Attitude towards the museum Facebook page	6
Intention to visit the museum	4
<b>Total</b>	<b>33</b>

### 5.3.2. Regression

For the analysis of this study, multiple regression analysis was used. Multiple regression is based in correlation as Cohen stated in 1968, and is being used to investigate the relationship between one continuous variable and a number of independent variables. There are several types of multiple regression, in this research the standard one will be used because all the independent variables are inserted into the equation simultaneously. When we run a regression analysis, the coefficient of determination  $R^2$  is testified,  $R^2$  measures the accuracy that the examined model can predict future results.  $R^2$  values range from 0 to 1, one indicates the perfect model and zero the insufficient model (Pallant, 2001). The distribution of all the variables is summarized in Table 4. The mean Usefulness is 4.88 ranging from 1 to 7. Easiness of use has the maximum mean score in the seven-point Liker scale followed by informativeness. The range of the scores differs across the variables.

*Table 1: Mean of the variables*

<i>Variable</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>Std.</i>
<i>Usefulness</i>	<i>1.00</i>	<i>7.00</i>	<i>4.881</i>	<i>1.17</i>
<i>Easiness of use</i>	<i>1.00</i>	<i>7.00</i>	<i>5.439</i>	<i>1.09</i>
<i>Enjoyment</i>	<i>1.00</i>	<i>7.00</i>	<i>4.379</i>	<i>1.48</i>
<i>Informativeness</i>	<i>1.00</i>	<i>7.00</i>	<i>5.015</i>	<i>1.08</i>
<i>Art involvement</i>	<i>1.00</i>	<i>7.00</i>	<i>4.359</i>	<i>1.53</i>
<i>Entertainment</i>	<i>1.00</i>	<i>7.00</i>	<i>4.927</i>	<i>1.17</i>
<i>Attitude</i>	<i>1.00</i>	<i>7.00</i>	<i>4.329</i>	<i>1.22</i>
<i>Intention to visit</i>	<i>1.00</i>	<i>7.00</i>	<i>4.359</i>	<i>1.25</i>

**i. Multicollinearity test**

The first step before conducting a regression model is to run a simple multicollinearity test in order to check the relation between the variables using the value of Pearson Correlation (r) (see Appendix VI). The assumption that has been made is that  $r > 0.5$  shows a high correlation between two variables (Cohen, 1988). We can observe that almost all independent variables have either small or medium relations between them,  $r < 0.5$ . There are only some variables that shown a slightly higher collinearity, informativeness with entertainment with  $r = 0.591$ . As a result, there is no multicollinearity between two independent variables because none of them is highly correlated with another ( $r \approx 1$ ).

**ii. Regression with “attitude” the dependent variable**

In order to test the effect of perceived usefulness (*Hypothesis 1*), perceived ease of use (*Hypothesis 2*), perceived enjoyment (*Hypothesis 3*), perceived informativeness (*Hypothesis 4*), perceived entertainment of the Facebook page on the consumer’s attitude towards the museum page on Facebook (*Hypothesis 5*), and the art involvement a person has (*Hypothesis 6*), a multiple regression analysis was conducted:

- **Dependent variable: Attitude towards the museum Facebook page.**

❖  $Attitude\ towards\ FB = b_0 + (b_1)\ perceived\ usefulness + (b_2)\ perceived\ ease\ of\ use + (b_3)\ perceived\ enjoyment + (b_4)\ perceived\ entertainment + (b_5)\ informativeness + (b_6)\ art\ involvement + \epsilon_i$

Multiple Linear Regression 1– R Square Table.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857a	<b>.735</b>	<b>.725</b>	.6421

As it was mentioned above, the adjusted R square should be used for the analysis. The adjusted R square obtained for this model indicates that 72.5% of the variation in the dependent variable (attitude) can be explained by the six independent variables. It shows that this could be a useful model to predict attitude, as the adjusted R square is closer to one, which indicates an accurate model. Moreover, as ANOVA is significant, our model is valid.

ANOVA <sup>a</sup>						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	193.979	6	32.330	78.403	<b>.000b</b>
	Residual	70.101	170	.412		
	Total	264.079	176			

a. Dependent Variable: Attitude

b. Predictors: (Constant), Art\_involv, Ease\_of\_use, Entertainment, Usefulness, enjoyment, Informativeness

The result of the regression and the equation that links the independent variables with the dependent one, are the result of the below table:

#### Multiple Linear Regression 1– Coefficients

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.659	.304		-2.171	<b>.031</b>		
	Usefulness	.074	.049	.077	1.520	.130	.604	1.656
	Ease_of_use	.121	.054	.108	2.232	<b>.027</b>	.670	1.491
	Enjoyment	.223	.049	.270	4.570	<b>.000</b>	.449	2.229
	Entertainment	.290	.056	.277	5.199	<b>.000</b>	.552	1.813
	Informativeness	.054	.069	.048	.795	.428	.427	2.344
	Art_involv	.303	.040	.378	7.653	<b>.000</b>	.639	1.564

a. Dependent Variable: Attitude

From the above table we could understand that there are not all the independent variables significant. More specifically four of the variables are significant: Ease of use, Enjoyment, Entertainment, and Art involvement ( $p < 0.05$ ). One variable of the extended TAM (perceived Usefulness) and Informativeness are insignificant ( $p > 0.05$ ) which means that they do not have

an important effect in our dependent variable “attitude” and overall they do not have any significant effect into the regression model.

The Variance Inflation Factors (VIF) columns is an extra evidence that there is no multicollinearity concern between the independent variables as all the values of variance inflation factors are lower than 10, which is the acceptance value (Kennedy P., 1992). Another critical column in the table is the Unstandardized Betas column, each of these numbers presents the individual contribution of the predictor to the model, and as well, the standardized betas reveal the magnitude of the independent’s effect on the result.

It is noticeable that the two variables Usefulness and Informativeness, do not affect the attitude, while all the rest affect the dependent variable.

In order to explain this further, the enjoyment has a positive impact on the attitude towards a museum Facebook page and if it increases by one unit, the attitude will increase by 0.223, when all the other variables remain constant (*ceteris paribus*). The following equation concludes the results of this multiple regression:

- **Dependent variable: Attitude towards the museum Facebook page.**

$$\diamond \textit{ Attitude towards FB} = -0.659 + (0.074) \textit{ perceived usefulness} + (0.121) \textit{ perceived ease of use} + (0.223) \textit{ perceived enjoyment} + (0.290) \textit{ perceived entertainment} + (0.054) \textit{ informativeness} + (0.303) \textit{ art involvement} + \varepsilon_i$$

The results of this regression, have some dissimilarities with the literature in this research. One possible reason for this is that the study was conducted in the Facebook environment. It is probable that the participants in this survey have already a very high perceived usefulness of the museum Facebook page. Informativeness may not play a very important role to the respondents attitude towards a museum Facebook page as they might use the website of the museum for information about it and its events.



### 5.3.3. T- test

#### i. T - test with “willingness to visit” and “ attitude”

In order to test the relation between the attitude that a person has towards a museum Facebook page and his/her willingness to visit the actual museum an independent-samples t-test will be conducted. The first step in order to do this is to split the sample in two groups, the respondents with the positive attitude, and the respondents with the negative attitude and create a new categorical variable “pos\_neg\_attitude”. The mean of the attitude is 4,329 so we create two new groups: people with high attitude and people with low attitude depending on our sample, a new categorical variable: “pos\_neg\_attitude” is created.

*H7: “People with positive (high) attitude towards a museum Facebook page will have higher willingness to visit a museum in comparison with those who have less positive or negative (low) attitude.”*

The independent-samples t-test is used when you need to compare the mean scores on a continuous variable, in our case in “attitude” (Pallant, 2001). We conducted an independent-samples t-test, with willingness by “pos\_neg\_attitude”:

Group Statistics					
	Pos_Neg_attitude	N	Mean	Std. Deviation	Std. Error Mean
Willingness	Low Attitude	82	3.595	1.1498	.1270
	High Attitude	85	5.124	.8802	.0955

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Willingness	Equal variances assumed	5.329	.022	-9.671	165	.000	-1.5290	.1581	-1.8412	-1.2168
	Equal variances not assumed			-9.625	151.717	.000	-1.5290	.1589	-1.8429	-1.2152

In the first table “Group Statistics”, we can see the mean and the standard deviations of each group. In order to check our assumptions which is our hypothesis that: *“People with positive (high) attitude towards a museum Facebook page will have higher willingness to visit a museum in comparison with those who have less positive or negative (low) attitude”* we must check the second table. Because the Sig value is less than 0.05, we must use the numbers form the second line of the table “Equal variances not assumed” (Pallant, 2001).

The assumption is supported by the Sig. (2-tailed) value, which is less than 0.05. This means that there is a significant difference in the mean scores on our dependent variable (willingness) for each of the two groups. In addition, the level of the differences in the means was very big, based on the Eta squared value = 0.35 (Cohen, 1988).

## Overview of Hypotheses Test

Hypothesis	Outcome
<i>H1: The perceived usefulness of a Facebook museum page will have a significant impact on the attitude of a user towards this page.</i>	Not supported
<i>H2: The perceived ease of use of a Facebook museum page will have a significant impact on the attitude of a user towards this page.</i>	Supported
<i>H3: The perceived enjoyment of a Facebook museum page will have a significant impact on the attitude of a user towards this page.</i>	Supported
<i>H4: The attitude of a user towards a museum Facebook page is positively related to the perceived informativeness.</i>	Not supported
<i>H5: The attitude of a user towards a museum Facebook page is positively related to the perceived entertainment.</i>	Supported
<i>H6: The attitude of a user towards a museum Facebook page is positively related to the level of the involvement with arts that a person has.</i>	Supported
<i>H7: People with positive (high) attitude towards a museum Facebook page will have higher willingness to visit a museum in comparison with those who have less positive or negative (low) attitude.</i>	Supported

## 6. CONCLUSIONS

The aim of this study is to examine the link between social media, particularly Facebook, and museums. Social networking sites have become a powerful tool in today's museum marketing strategy. Especially when museums need to advertise an exhibition or an upcoming event can post all the information on the Facebook page, making the engagement broader and faster. In this study, a survey was conducted to reveal some answers for the research question: *“To what extent the social factors/characteristics of the museum Facebook page and the involvement a person has with arts, would influence the attitude of a user towards a museum on Facebook? The more positive this attitude is, the higher is the willingness of this person to visit the actual museum”*

In the last chapter of this paper, a discussion based on the results of all the hypotheses testing will follow. Then, the managerial implications of this study will be discussed before moving to the main limitations. At the end, ideas for further research in this area are being proposed.

### 6.1 DISCUSSION

After an extended presentation of the literature review, an online questionnaire, and a complete analysis based on the survey that was conducted, this paper unveils some great findings about the relation between museums and social media users.

To begin with, the first three hypotheses were examining whether there was a positive relation between the extended TAM (W. Lee et al, 2012) and the attitude that a user has towards this museum Facebook page. The extended TAM consists of three variables: perceived usefulness, perceived ease of use and perceived enjoyment. Perceived ease of use and perceived enjoyment were both significant and positive, showing that they affect positively the attitude of Facebook users regarding the museum Facebook page. The third variable perceived usefulness was insignificant, which means that it has no effect in the attitude of the users. A probable reason for this result may be that the people who participated to this survey were all Facebook users, and usefulness is observed as something common and standard that does not add any extra value on the museum Facebook page. After the examination of the extended TAM, two other variables that are part of “uses and

gratifications” (U&G) model were tested, perceived informativeness and perceived entertainment. The results of the survey and the analysis showed that only perceived entertainment has a positive effect in the attitude of a user towards a museum Facebook page. On the other hand, perceived informativeness has no relation with the attitude, which means that people do not really follow a museum on Facebook in order to get information for it. For example, a website may be a more effective way to find out these information (opening hours, services, etc.). Moreover, the next hypothesis tested the relationship between the art involvement and the person’s attitude on Facebook. As it was expected, and based on Iwasaki & Havitz theory, the higher the level of art involvement of a user, the higher the positive attitude of this user.

The last hypothesis of this paper was based on the relationship between the attitude of a user for a museum Facebook page and his/her willingness to visit the actual museum. The sample was divided into two groups containing the same number of correspondents, the ones with positive attitude and the ones with less positive attitude for the museum Facebook pages. Afterwards, it was examined which of these two groups has a higher willingness to visit the actual museum. Based on the theory that the actual behavioral intention is determined by the attitude towards the system (Venkatesh, 2000), it was expected that the ones with more positive attitude were more willing to visit the museum itself. These results demonstrate the effect that social media can have in the intention of a person in terms of visitation.

To sum up, the findings of this study reveals that usage of social networking sites as a marketing tool can uncovers a strong benefit for museum with many ways.

## **6.2 MANAGERIAL IMPLICATIONS**

Based on the findings of this paper, several remarkable outcomes have discovered, some of which hold a degree of practical applications for the marketing of museums in our era. The results of this study are giving an important insight to the museums’ people to understand which paths they should follow in order to reach their objectives.

This paper reveals how the social factors - characteristics, the extended TAM, and the art involvement a person has, may affect his/her attitude towards a museum Facebook page and how this attitude influences his/her intention to visit a museum. The main implication for the

museum marketers is to understand the significant value of Facebook for museums, events, and exhibitions.

One of the findings of the study revealed that the art involvement has a major effect in the attitude towards museum Facebook pages. This means that people who are more involved with art have a more positive attitude towards the museums on Facebook. Additionally, another finding shows that positive attitude can lead to higher intention to visit a museum. These two aforementioned findings reveal an opportunity for museums advertisements, museum can focus their advertisements to the more art involved active social media audience, and in that way they will be able to increase their visitation, as they will be targeting to the right people.

A social networking site is a low cost tool that can increase the awareness of a brand, in our case the awareness of a museum. This tool must be used wisely in order to achieve its objectives. Based on the findings, it can be assumed that if a museum Facebook page uses more interactions and more entertaining activities it may affect positively the intention of social media users to visit this museum. This helps museums and marketers to plan a more effective marketing strategy including social media into their mix.

### **6.3 LIMITATIONS & FUTURE RESEARCH**

Every study has some particular limitations leading to ideas for further and more complete research, as a result this study has some restraints and ideas for further examination of the topic that are presented in this part of the chapter.

The first limitation that is important to mention is the small number of respondents (177 participants in the survey). Furthermore, the sample was not so diverse in terms of age, education, and income. The topic could have a further interest if the sample was differentiated in terms of income. People with high income may have a higher willingness to visit a museum because for them the price is not a limitation. On the other hand people with a lower income, even they are really art involved and willing to visit a museum, they may not be able to do so. This can also lead to another idea for further research, that the museum can create online experience and engagement with their exhibitions using the social networking sites so they can be accessible from a broader audience, people that do not have the potential to visit.

Moreover, this study does not take into account the distance that the respondents may have with the museum, because the study is not focusing in one certain museum in a specific city. This aforementioned limitation can lead to a further research, examining the same topic but for a specific museum.

Another limitation of the study is based on the design of the questionnaire, which might have resulted also into the failure of some hypotheses not to be supported because the questionnaire of this paper that could have been designed differently. It could be more specific, asking questions for specific museum Facebook pages finding results comparing these pages. Moreover, the need to belong could be added in as an extra independent variable of the social factors that affect the attitude a person has towards the museum Facebook page, even if is a complex one. It would be very interesting to observe if someone who has a strong the need to belong in a social circle that is interested in museums then it is more likely to be a member of the museum's Facebook page.

The finding of the study can lead to further investigation of the topic "Facebook and museums" this time from the visitor's perspective, examining the attitude that a visitor has towards the museums Facebook page before and after his/her visit. Before the visit, did the visitors have liked the museum Facebook page? After the visit, is he/she willing to post something on their personal social media pages from this visit?

Finally, yet importantly, another limitation is that even though the research was about museums' engagement in Social Media, we examine only museums' engagement via Facebook and not in other social networking site as Twitter, Instagram, etc. In a further stage this study can focus on the different ways museums have to engage with their audience in the different social media.

## 1. LIST OF REFERENCES

1. Adrienne Fletcher and Moon J. Lee\*, *Museum Management and Curatorship* Vol. 27, No. 5, December 2012, 505521 DIGITAL HERITAGE “Current social media uses and evaluations in American museums” of *Marketing* 3, 3 (January) 1,0 -15.
2. Ajzen I. The theory of planned behavior. *Organizational Behavior & Human Decision Processes* 1991; 50:179-11.
3. Amichai-Hamburger & Ben-Arzi, 2000
4. Angela V. Hausman, Jeffrey Sam Siekpe, “The effect of web interface features on consumer online purchase intentions”, *Journal of Business research* 62 (2009).
5. Audrey Gilmore, Ruth Rentschler, “Changes in museum management: A custodial or marketing emphasis?” *Journal of Management Development Emerald Article*.
6. Bartlett, M. S. (1954). A note on the multiplying factors for various chi square approximations. *Journal of the Royal Statistical Society*, 16 (Series B), 296–298.
7. Bateson, J. (1991), *Managing Services Marketing*, 2nd ed., Dryden Press, Forth Worth, TX.
8. Benassi Mario, Cirrincione Armando “M-Art-keting: Adding Value Through Multimedia Technology to the Museums Industry, A Network Marketing Approach to the Cultural Industry”, Paper presented at the IMP Conference, Lugano, September 2003.
9. Berthon et al. 2012
10. Bryman A, Bell E. *Business research methods*. 2nd edition. Oxford University Press; 2007.
11. Burton, C., & Scott, C. (2003). *Museums: Challenges for the 21st century*. *International Journal of Arts Man*
12. Cassidy, J. (2006, May 15). Me media. *The New Yorker*, 50–59.
13. Chaffey et al. 2009, *Internet marketing. Strategy, Implementation and Practice*, Dave Chaffey, Fiona Ellis-Chadwick, Richard Mayer, Kevin Johnston)
14. Chen Q and Wells WD. Attitude towards the site. *J Advert Res* 1999;39(5):27-37.
15. Chen Q, Clifford SJ, and Wells WD. Attitude towards the site II: new information. *J Advert Res* 2002:33-45 March/April.
16. Cohen, J. (1968). Multiple regression as a general data analytic – system. *Psychological Bulletin*, 70. 426 – 443.
17. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.



18. Committee on Definitions, Marketing Definitions: A Glossary of Marketing Terms, American Marketing Association, 1960, p. 21.
19. Cronbach, L., J. (1951) Coefficient alpha and the internal structure of tests, *Psychometrika*, 16 (3): 297-334
20. D.A.Yorke and R.R.Jones “ Marketing and Museums” , 2007.
21. Dholakia, U. M., &Durham, E. (2010). One caf’e chain’s Facebook experiment. *Harvard Business Review*, 88, 26-26.
22. Dholakia, U.M., Bagozzi, R.P., 2001. Consumer behavior in digital environments. In: Wind, J., Mahajan, V. (Eds.), *Digital Marketing: Global Strategies from the World’s Leading Experts*. Wiley, New York, NY, pp. 163–200.
23. Drury, G., 2008. Social media: should marketers engage and how can it be done effectively? *Journal of Direct, Data and Digital Marketing Practice* 9 (3), 274–277.
24. Eighmey J., Profiling users responses to commercial websites. *J Advert Res* 1997;37(3):59-66.
25. Emma L. Pelling, B. Behav. Sc. & Katherine M.White, Ph.D. *The Theory of Planned Behavior Applied to Young People’s Use of Social Networking Web Sites*.
26. Fishbein, M., Ajzen, I., 1975. *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. Addison – Wesley, Reading, MA.
27. Gefen D. TAM or just plan habit: a look at experienced online shoppers. *J End User Comput* 2003; 15(3); 1-14.
28. Hana et al. 2011, *We’re all connected: The power of the social media ecosystem*, Richard Hanna a, Andrew Rohm a, Victoria L. Crittenden
29. Harsha Gangadharbatla, “Facebook Me: Collective Self-Esteem, Need to Belong, and Internet Self-Efficacy as Predictors of the iGeneration’s Attitudes toward Social Networking Sites”, Ph.D. June 9, 2007, Submitted to Special Issue on Online User Generated Content, *Journal of Interactive Advertising*
30. Hsu, C.L., Lu, H.P., 2004. Why do people on-line games? An extended TAM with social influences and flow experience. *Information and Management* 41, 853-868.
31. <http://people.duke.edu/~leary/scales.html>
32. [http://sports.yahoo.com/nhl/blog/puck\\_daddy/post/Insidethe-NHL-s-social-media-innovations-growi?urn=nhl-199092](http://sports.yahoo.com/nhl/blog/puck_daddy/post/Insidethe-NHL-s-social-media-innovations-growi?urn=nhl-199092)
33. <http://www.museum-analytics.org/museums/>
34. ICOM 2007

35. Jan H. Kietzmann 1\*, Bruno S. Silvestre 2, Ian P. McCarthy 1m and Leyland F. Pitt 1, "Unpacking the social media phenomenon: towards a research agenda"
36. Jason Y.C.H.o, Melanie Dempsey, "Viral Marketing: Motivations to forward online content", *Journal of Business Research* 63 (2010) 1000-1006.
37. Jean-Michel Tobelem, *Museum Management and Curatorship* Publication details, including instructions for authors and subscription information: <http://www.tandfonline.com/loi/rmmc20>  
The Marketing Approach in Museums Published online: 11 Jul 2007.
38. Jenny Kidd, (2011), " Enacting engagement online: framing social media use for the museum", *Information Technology & People*, Vol. 24 Iss: 1 pp. 64- 77.
39. Jöreskog, K.G. (1969). A general approach to confirmatory maximum likelihood factor analysis. *Psychometrika*, 34, 183-202.
40. Jöreskog, K.G. (1971). Statistical analysis of sets of congeneric tests. *Psychometrika*, 36, 109-133.
41. K. J. Blois, *The Marketing of Services: An Approach* by K. J. Blois, *European Journal of Marketing* 8, 2.
42. Kaiser, H. (1970). A second generation Little Jiffy. *Psychometrika* , 35, 401–415.
43. Kaiser, H. (1974). An index of factorial simplicity. *Psychometrika* , 39, 31–36.
44. Kennedy, P. (1992). *A Guide to Econometrics*. Oxford: Blackwell.
45. Kiely, M., and M. Halliday. 1999. "Values: New Brand for the Millennium." *Executive excellence (Australian Edition)*, Vol.
46. Kietzmann et al., 2012
47. Kotler and Kotler, (2008). (Kotler , N. , p. Kotler and W Kotler, 2008 , *Museums Marketing and Strategy* 2nd edition, BOOK)
48. Kotler Neil and Kotler Philip, *Can Museums be All Things to All People? Missions, Goals, and Marketing's Role*
49. Kotler, Philip and Sidney J. Levy (1969a), "Broadening The Concept of Marketing" *Journal*
50. Kuklinski, (2012). (*Public Relations Review* 38 (2012) 619– 626 Contents lists available at SciVerse ScienceDirect *Public Relations Review*)
51. Lai, V.S., Li, H., 2005. "Technology acceptance model for Internet banking: an invariance analysis." *Information and Management* 42 (2), 373–386.
52. Leary MR, Kelly KM, Cottrell CA, Schreindorfer L. Individual differences in the need to belong: Mapping the nomological network. Duke University, Department of Psychology; unpublished manuscript.

53. Leary, M. R., Kelly, K.M., & Schreindorfer, L. S. (2001). Individual differences in the need to belong. Unpublished manuscript, Wake Forest University, Winston-Salem, NC.
54. Lee et al, 2012, "The effect of Facebook users' arousal and valence on intention to go to the festival: Applying an extension of the technology acceptance model" Woojin Leea, Lina Xiongb,1, Clark Huc,1
55. McLean, F. (1997), *Marketing the Museum*, Routledge, London.
56. Moon, J. – W., Kim, Y. – G., 2001. Extending the TAM for a World- Wide- Web context. *Information and Management* 38 (4), 217-230.
57. Murray, H. A. (1938). *Explorations in personality*. New York, NY: Oxford University Press.
58. Nicole B. Ellison, Charles Steinfield, Cliff Lampe, "The Benefits of Facebook "Friends:" Social Capital and College Students' Use of Online Social Network Sites", *Journal of Computer- Mediated Communication*.
59. O'Cass, A. (2000), "An assessment of consumers product, purchase decision, advertising and consumption involvement in fashion clothing", *Journal of Economic Psychology*, 21 (5): 545-576.
60. ONLINE: Santos, J. R. A. (1999) Cronbachs' alpha: A tool for assessing reliability of scales, *Journal of Extension*, 37(2), online
61. Pallant, J. (2001). *SPSS Survival Guide: A step by step guide to data analysis using SPSS*. Australia: Allen & Unwin.
62. Paul Capriotti a, \*, Hugo Pardo Kuklinskib, "Assessing dialogic communication through the Internet in Spanish museums."
63. Pfefferle, K. (2009), MUSEUM SOCIAL MEDIA CATEGORIES? Available at : [www.kevinpfefferle.com/2009/02/09museum-social-media-categoies/](http://www.kevinpfefferle.com/2009/02/09museum-social-media-categoies/)
64. Philip Kotler , A Generic Concept of Marketing Author(s), Source: *Journal of Marketing*, Vol. 36, No. 2 (Apr., 1972), pp. 46-54
65. Philip Kotler, "The Role Played by the Broadening of Marketing Movement in the History of Marketing Thought" Source: *Journal of Public Policy & Marketing*, Vol. 24, No. 1, Dimensions of Marketing's Relationship to Society (Spring, 2005), pp. 114-116
66. Philip Kotler, The Role Played by the Broadening of Marketing Movement in the History of Marketing Thought, Source: *Journal of Public Policy & Marketing*, Vol. 24, No. 1, Dimensions of Marketing's Relationship to Society (Spring, 2005), pp. 114-116)
67. Pierre R. Berthon a, Leyland F. Pitt b,\*, Kirk Plangger b, Marketing meets Web 2.0, social media, and creative consumers: Implications for international marketing strategy, Daniel

Shapiro b) A Department of Communication Studies, Universitat Rovira i Virgili, Av. Catalunya,

68. Rejoinderto Professor Luck, (1969b)," New Form of Marketing Myopia: "Journal of Marketing 3, 3 (July), 55-57.
69. Robert E. Wilson<sup>1</sup>, Samuel D. Gosling<sup>2</sup>, and Lindsay T. Graham<sup>2</sup> <sup>1</sup>Department of Psychology, Washington University in St. Louis, MO, and <sup>2</sup>Department of Psychology, University of Texas, Austin
70. Ruth Rentschler and Anne-Marie Hede, 2007, Museums Marke.ting
71. S.Pookulangara, K, Koesler. "Cultural influence on consumers' usage of social networks and its' impact on online purchase intentions", Journal of Retailing and Consumer Services.
72. Scott 2010; Kaplan and Haenlein, 2010). (Users of the world, unite! The challenges and opportunities of Social media)
73. Shostack, G. (1985), ``Planning the service encounter", in Czepiel, J., Solomon, R. and Surprenant, C. (Eds), The Service Encounter, Lexington Books, Lexington, MA.
74. Spearman, C. (1904). General intelligence, objectively determiredand measured. American Journal of Psychology,15, 201-293.
75. Tabachnick, B. G., & Fidell, L. S. (2001). Using multivariate statistics (4th edn). New York: HarperCollins. Chapter 13.
76. The Importance of Word of Mouth for Museums: An Analytical Framework Hausmann, Andrea International Journal of Arts Management; Spring 2012; 14, 3; ProQuest pg. 32
77. Thurstone, L. L. (1947). Multiple factor analysis. Chicago: University of Chicago Press.
78. Ugur Yucelt , Marketing Museums: An Empirical Investigation Among Museum Visitors a Pennsylvania State University, Harrisburg E-mail: Published online: 21 Oct 2008. Journal of Nonprofit & Public Sector Marketing
79. Venkatesh, V., 2000. Determinants of perceived ease of use: integrating control, intrinsic motivation, and emotion into the technology acceptance model. Information Systems Research 11 (4), 342–365.
80. Woojin Leea,☐, Lina Xiongb,1, Clark Huc,1 "The effect of Facebook users' arousal and valence on intention to go to the festival: Applying an extension of the technology acceptance model"
81. Wyshynski, G. (2009, October 29). Inside the NHL's social mediainnovations, growing pains. Retrieved October 1, 2010, from

82. Zaichkowsky, J., L. (1985) Measuring the Involvement Construct, *Journal of Consumer Research*, 12 (3): 341-352.
83. Zhang P, von Dran G. Satisfiers and dissatisfies: a two- factor model for website design and evaluation. *J Am Soc Inf Sci* 2000; 51:1253-68.

## APPENTICES

### Appendix I: Questionnaire and Online Survey

Museum's Social Media study.

Q1 What is your gender?

1. Male (1)
2. Female (2)

Q2 What is your age range?

3. 18-24 (1)
4. 25-33 (3)
5. 34-44 (4)
6. 45 or older (5)

Q3 What is your nationality please indicate.

Q4 Indicate your monthly salary.

7. less than 800 (1)
8. 800 - 1200 (2)
9. 1200 - 1600 (3)
10. 1600 - 2000 (4)
11. 2000 or more (5)

Q5 What is your education level?

12. High school (1)
13. Bachelor (2)
14. Master (3)
15. Doctor (4)
16. Professor (5)
17. Other (6)

Q6 Now by clicking the links below, you will be transferred in three Facebook pages of three different museums in different countries. Museum's official Facebook page 1 Museum's official Facebook page 2 Museum's official Facebook page 3 Have you ever visited any of these three museums?

18. Yes (1)

19. No (2)

Q7 Read each of the following statements and indicate how much you agree with each, based on your beliefs after the previous interaction with the facebook pages and your experience.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Facebook is useful for finding museums (1)	20.	21.	22.	23.	24.	25.	26.
Museum Facebook pages are useful for finding events and exhibitions. (2)	27.	28.	29.	30.	31.	32.	33.
Facebook is useful finding out which museum events my friends are attending (3)	34.	35.	36.	37.	38.	39.	40.
Facebook enables me to access a lot of information about museums (4)	41.	42.	43.	44.	45.	46.	47.

Facebook enables me to access the newest information about museums (5)	48.	49.	50.	51.	52.	53.	54.
--	-----	-----	-----	-----	-----	-----	-----



Q8 Based on previous interaction with the museum Facebook pages, indicate how much you agree or you disagree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Learning how to view and share museums events/pages on Facebook is easy to me. (1)	55.	56.	57.	58.	59.	60.	61.
Museum pages on Facebook make it easy to find out about museums' exhibition/events . (2)	62.	63.	64.	65.	66.	67.	68.
Facebook makes it easy to find out about museum pages and museum events that my friends "like". (3)	69.	70.	71.	72.	73.	74.	75.
The actual process of viewing and "liking" museum Facebook pages is fun. (4)	76.	77.	78.	79.	80.	81.	82.
I enjoy sharing museum exhibitions and events with my friends on Facebook that I am interested in. (5)	83.	84.	85.	86.	87.	88.	89.
I enjoy receiving information about museums events and exhibitions on Facebook. (6)	90.	91.	92.	93.	94.	95.	96.

Q9 Based on the previous interaction of the three museum Facebook pages, indicate how much you agree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
The Facebook page is enjoyable (5)	97.	98.	99.	100.	101.	102.	103.
The Facebook page is pleasing (6)	104.	105.	106.	107.	108.	109.	110.
The Facebook page is entertaining (7)	111.	112.	113.	114.	115.	116.	117.
The Facebook page is a very good source of information (8)	118.	119.	120.	121.	122.	123.	124.
The Facebook page supplies relevant information (9)	125.	126.	127.	128.	129.	130.	131.
The Facebook page is informative about the museums' services (10)	132.	133.	134.	135.	136.	137.	138.

Q10 Based on the previous interaction with the three museum Facebook pages, indicate how much you agree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Art means a lot to me (1)	139.	140.	141.	142.	143.	144.	145.
Art is a significant part of my life (2)	146.	147.	148.	149.	150.	151.	152.
I am very interested in arts (3)	153.	154.	155.	156.	157.	158.	159.
I am very much involved with arts (4)	160.	161.	162.	163.	164.	165.	166.
I consider art (in any aspect) to be a central part of my life (5)	167.	168.	169.	170.	171.	172.	173.
I pay a lot of attention in upcoming art events and exhibitions (6)	174.	175.	176.	177.	178.	179.	180.
Visiting an art event or a museum is important for me (7)	181.	182.	183.	184.	185.	186.	187.
Visiting art exhibitions or museums is a significant part of my life (8)	188.	189.	190.	191.	192.	193.	194.
Visiting art institutions, events, and museums is one of the most satisfying and enjoyable things I do (9)	195.	196.	197.	198.	199.	200.	201.

Q11 Based on the previous interaction of the three museum Facebook pages, indicate how much you agree with the following statements.

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
I like sharing and viewing museums exhibitions, information and events on Facebook (1)	202.	203.	204.	205.	206.	207.	208.
I feel good about sharing and viewing events on Facebook (2)	209.	210.	211.	212.	213.	214.	215.
Overall, my attitude toward museums on Facebook is favorable (3)	216.	217.	218.	219.	220.	221.	222.
I will strongly recommend others from my social circles to find and "like" museums (4)	223.	224.	225.	226.	227.	228.	229.
Using museum Facebook pages is a good idea (5)	230.	231.	232.	233.	234.	235.	236.
Using museum Facebook pages is a pleasant idea (6)	237.	238.	239.	240.	241.	242.	243.
I will frequently go to the exhibitions of museums that	244.	245.	246.	247.	248.	249.	250.

I liked on Facebook (7)							
I am most likely to go to the museum after having seen the posts (photos, comments, videos) listed on Facebook (8)	251.	252.	253.	254.	255.	256.	257.
The Facebook page of the museum solidified my decision to visit the museum (9)	258.	259.	260.	261.	262.	263.	264.
I feel a sense of personal satisfaction when I am visiting a museum (10)	265.	266.	267.	268.	269.	270.	271.

Q14 Thank you very much for your time and your cooperation. If you are interested in receiving the results of this study, please indicate your e-mail address. E-mail address:

**Appendix II: Facebook Museum Pages**



**Tate**  
587,157 likes · 14,671 talking about this · 113,263 were here

Liked Message

Art gallery · Art Museum · Modern Art Museum  
London, United Kingdom  
020 7887 8888

Photos | Watch Tate Films | Instagram | Twitter

About - Suggest an Edit

Highlights

Post Photo / Video  
Write something...

**Tate**  
26 minutes ago  
What's your first memory of #Lowry? Curator Helen Little shares hers on her blog: <http://ow.ly/mCDs3>

17 Friends Connected to Tate  
15 friends like this  
3 friends were here



**Van Gogh Museum**  
139,235 likes · 14,061 talking about this · 90,047 were here

Liked Message

€5 (10-30) · Art Museum · Art gallery  
Paulus Potterstraat 7, 1071 CX Amsterdam, Netherla...  
+31 20 570 5200  
Today 09:00 - 18:00

Photos | Map | Likes | Events

About - Suggest an Edit

Highlights

Post Photo / Video  
Write something...

**Van Gogh Museum**  
Today  
For our Dutch speaking fans:  
Zou jij het leuk vinden om filmploegen en fotografen te begeleiden in het museum? En wil je meer leren over het schrijven en vertalen van eerbrieven? Dan zijn wij op

10 Friends Connected to Van Gogh Museum  
5 friends like this  
5 friends were here



The link of the questionnaire was the following:

[https://qtrial.qualtrics.com/SE/?SID=SV\\_3WyKpW8Pjr6c8kZ](https://qtrial.qualtrics.com/SE/?SID=SV_3WyKpW8Pjr6c8kZ)

### Appendix III: Items per variable

<i>Variables</i>	<i>Statements</i>
<b>Perceived usefulness of a Facebook page</b>	<ol style="list-style-type: none"> <li>1. Facebook is useful for finding museums.</li> <li>2. Facebook is useful for finding museums events and exhibitions.</li> <li>3. Facebook is useful in find out which museums events my friends are attending</li> <li>4. Facebook enables me to access a lot of information about museums.</li> <li>5. Facebook enables me to access the newest information about museums.</li> </ol>
<b>Perceived ease of use of a Facebook page</b>	<ol style="list-style-type: none"> <li>1. Learning how to view and share museums events/ pages on Facebook is easy to me</li> <li>2. Facebook makes it easy to find out about museums exhibitions/ events.</li> <li>3. Facebook makes it easy to find out about museum pages and museum events that my friends “like”.</li> </ol>
<b>Perceived enjoyment of Facebook page</b>	<ol style="list-style-type: none"> <li>1. The actual process of viewing and liking museum Facebook pages is fun</li> <li>2. I enjoy sharing museum exhibitions and events with my friends on Facebook that I am interested in.</li> <li>3. I enjoy receiving information about museum events and exhibitions on Facebook.</li> </ol>
<b>Entertainment</b>	<ol style="list-style-type: none"> <li>1. The Facebook page is enjoyable</li> <li>2. The Facebook page is pleasing</li> <li>3. The Facebook page is entertaining</li> </ol>
<b>Informativeness</b>	<ol style="list-style-type: none"> <li>1. The Facebook page is a very good source of information</li> <li>2. The Facebook page supplies relevant information</li> <li>3. The Facebook page is informative about the museum’s services</li> </ol>



<b>Art Involvement</b>	<ol style="list-style-type: none"> <li>1. Art means a lot to me.</li> <li>2. Art is a significant part of my life.</li> <li>3. I am very interested in arts.</li> <li>4. I am very much involved with arts.</li> <li>5. I consider art (in any aspect) to be a central part of my life</li> <li>6. I pay a lot of attention in upcoming art events and exhibitions.</li> <li>7. Visiting an art event or a museum is important for me.</li> <li>8. Visiting art exhibitions or museums is a significant part of my life.</li> <li>9. Visiting art institutions, events, and museums is one of the most satisfying and enjoyable things I do.</li> </ol>
<b>Attitude towards using a museum Facebook page</b>	<ol style="list-style-type: none"> <li>1. I like sharing and viewing museums exhibitions, information, and events on Facebook.</li> <li>2. I feel good about sharing and viewing events on Facebook.</li> <li>3. Overall, my attitude toward museums on Facebook is favorable.</li> <li>4. I will strongly recommend others from my social cycles to find and like museums on Facebook.</li> <li>5. Using museum Facebook pages is a (good/bad) idea.</li> <li>6. Using museum Facebook pages is a (pleasant/unpleasant) idea.</li> </ol>
<b>Willingness to visit a museum</b>	<ol style="list-style-type: none"> <li>1. I will frequently go to the exhibitions of museums that I liked on Facebook.</li> <li>2. I am most likely to go to the museum after having seen the posts (photos, comments, videos) listed on Facebook.</li> <li>3. The Facebook page of the museum solidified my decision to visit the museum.</li> <li>4. I feel a sense of personal satisfaction when I am visiting a museum.</li> </ol>

## Appendix IV: SPSS output-Descriptive

### I. Mean of the variables

**Table 1**

Descriptive Statistics							
	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance
Usefulness	177	6.0	1.0	7.0	4.881	1.1771	1.385
Ease_of_Use	177	6.0	1.0	7.0	5.439	1.0941	1.197
Enjoyment	177	6.0	1.0	7.0	4.379	1.4841	2.202
Informativeness	177	6.0	1.0	7.0	5.015	1.0812	1.169
Art_involv	177	6.0	1.0	7.0	4.359	1.5312	2.345
Attitude	177	6.0	1.0	7.0	4.329	1.2249	1.500
Willingness	177	6.0	1.0	7.0	4.359	1.2502	1.563
Entertainment	177	6.0	1.0	7.0	4.927	1.1679	1.364
Valid N (listwise)	177						

## Appendix V: Factor Analysis

### Factor Analysis - Perceived Usefulness

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.817
	Approx. Chi-Square	333.208
Bartlett's Test of Sphericity	df	10
	Sig.	.000

Table 1: Factor analysis Perceived Usefulness

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.022	60.440	60.440	3.022	60.440	60.440
2	.736	14.716	75.156			
3	.502	10.033	85.189			
4	.446	8.920	94.109			
5	.295	5.891	100.000			

Extraction Method: Principal Component Analysis.

Table 2: Total Variance Explained - Perceived Usefulness

Factor Analysis - Perceived Ease of use

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.711
Approx. Chi-Square	166.323
Bartlett's Test of Sphericity	df
	3
	Sig.
	.000

Table 3: Factor analysis Perceived Ease of use

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.153	71.758	71.758	2.153	71.758	71.758
2	.450	15.006	86.764			
3	.397	13.236	100.000			

Extraction Method: Principal Component Analysis.

Table 4: Total Variance Explained - Perceived Ease of use

Factor Analysis - Perceived Enjoyment

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.734
	Approx. Chi-Square	261.565
Bartlett's Test of Sphericity	df	3
	Sig.	.000

Table 5: Factor analysis Perceived Enjoyment

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.383	79.438	79.438	2.383	79.438	79.438
2	.349	11.642	91.080			
3	.268	8.920	100.000			

Extraction Method: Principal Component Analysis.

Table 6: Total Variance Explained - Perceived Ease of use

Factor Analysis – extended TAM

Table 7 i: Factor analysis TAM – excluding usefulness\_2

Rotated Component Matrix			
	Component		
	1	2	3
ease_of_use_3	.830		
ease_of_use_1	.820		
ease_of_use_2	.747		
usefulness_3	.616		.352
enjoyment_2		.872	
enjoyment_3		.863	
enjoyment_1		.815	.313
usefulness_4			.849
usefulness_5			.792
usefulness_1			.792

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.a

a. Rotation converged in 5 iterations.

Table 7 ii: Factor analysis TAM – excluding usefulness\_2

Rotated Component Matrix <sup>a</sup>			
	Component		
	1	2	3
enjoyment_2	.875		
enjoyment_3	.865		
enjoyment_1	.814	.318	
usefulness_4		.853	
usefulness_5		.802	
usefulness_1		.798	
ease_of_use_1			.853
ease_of_use_3			.798
ease_of_use_2			.772

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 5 iterations.

Factor Analysis - Entertainment

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.757
Approx. Chi-Square	473.005
Bartlett's Test of Sphericity	df
	3
	Sig.
	.000

Table 8: Factor analysis Entertainment

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.671	89.033	89.033	2.671	89.033	89.033
2	.212	7.081	96.114			
3	.117	3.886	100.000			

Extraction Method: Principal Component Analysis.

Table 9: Total Variance Explained - Entertainment

Factor Analysis – Informativeness

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.695
	Approx. Chi-Square	222.720
Bartlett's Test of Sphericity	df	3
	Sig.	.000

Table 10: Factor analysis informativeness

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.275	75.825	75.825	2.275	75.825	75.825
2	.458	15.272	91.096			
3	.267	8.904	100.000			

Extraction Method: Principal Component Analysis.

Table 11: Total Variance Explained - Entertainment

Factor Analysis – Art involvement

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.934
	Approx. Chi-Square	2194.471
Bartlett's Test of Sphericity	df	36
	Sig.	.000

Table 12: Factor analysis art involvement

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.340	81.551	81.551	7.340	81.551	81.551
2	.637	7.081	88.632			
3	.304	3.381	92.012			
4	.177	1.969	93.981			
5	.161	1.793	95.774			
6	.127	1.414	97.187			
7	.105	1.166	98.353			
8	.085	.949	99.302			
9	.063	.698	100.000			

Extraction Method: Principal Component Analysis.

Table 13: Total Variance Explained - Art Involvement

Factor Analysis – Attitude towards museum Facebook pages

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.846
	Approx. Chi-Square	686.255
Bartlett's Test of Sphericity	df	15
	Sig.	.000

Table 14: Factor analysis attitude towards a museum Facebook page

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.011	66.850	66.850	4.011	66.850	66.850
2	.819	13.650	80.499			
3	.430	7.163	87.662			
4	.310	5.171	92.833			
5	.268	4.471	97.304			
6	.162	2.696	100.000			

Extraction Method: Principal Component Analysis.

Table 15: Total Variance Explained - Attitude towards a museum Facebook page

Factor Analysis – Willingness to visit a museum

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.743
	Approx. Chi-Square	318.604
Bartlett's Test of Sphericity	df	6
	Sig.	.000

Table 16: Factor analysis willingness to visit a museum

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.700	67.507	67.507	2.700	67.507	67.507
2	.665	16.615	84.121			
3	.426	10.645	94.767			
4	.209	5.233	100.000			

Extraction Method: Principal Component Analysis.

Table 17: Total Variance Explained - Willingness to visit a museum

## Appendix VI: Correlation

Correlations <sup>b</sup>								
		Usefulness	Ease_of_use	Enjoyment	Human_factors	Entertainment	Informativeness	attitude
Usefulness	Pearson Correlation	1	.467**	.413**	.433**	.317**	.583**	.444**
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
Ease_of_use	Pearson Correlation	.467**	1	.387**	.304**	.244**	.500**	.406**
	Sig. (2-tailed)	.000		.000	.000	.001	.000	.000
Enjoyment	Pearson Correlation	.413**	.387**	1	.429**	.543**	.502**	.742**
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000
Human_factors	Pearson Correlation	.433**	.304**	.429**	1	.531**	.568**	.546**
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000
Entertainment	Pearson Correlation	.317**	.244**	.543**	.531**	1	.591**	.623**
	Sig. (2-tailed)	.000	.001	.000	.000		.000	.000
Informativeness	Pearson Correlation	.583**	.500**	.502**	.568**	.591**	1	.569**
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000



attitude	Pearson Correlation	.444**	.406**	.742**	.546**	.623**	.569**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=177

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.276	.343		-.806	.422		
	Usefulness	.046	.056	.047	.811	.419	.590	1.695
	Ease_of_use	.082	.061	.074	1.348	.179	.676	1.478
	Enjoyment	.403	.048	.489	8.455	.000	.604	1.656
	Human_factors	.171	.065	.154	2.648	.009	.597	1.676
	Entertainment	.228	.066	.217	3.476	.001	.516	1.938
	Informativeness	.048	.080	.043	.607	.545	.407	2.458

a. Dependent Variable: attitude

## Appendix VII: Mean of Willingness (T-test)

### Means Plots

